

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1985

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

SECOND SESSION

PART 1 (Pages 1-439)

**DEPARTMENT OF THE ARMY
Corps of Engineers—Civil
DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
TENNESSEE VALLEY AUTHORITY**

Printed for the use of the Committee on Appropriations



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1984

31-241 O

5181-37

COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

MARK O. HATFIELD, Oregon, *Chairman*

JAMES A. McCLURE, Idaho

JAKE GARN, Utah

THAD COCHRAN, Mississippi

JAMES ABDNOR, South Dakota

ROBERT W. KASTEN, JR., Wisconsin

MACK MATTINGLY, Georgia

PETE V. DOMENICI, New Mexico

J. BENNETT JOHNSTON, Louisiana

JOHN C. STENNIS, Mississippi

ROBERT C. BYRD, West Virginia

ERNEST F. HOLLINGS, South Carolina

WALTER D. HUDDLESTON, Kentucky

QUENTIN N. BURDICK, North Dakota

JIM SASSER, Tennessee

Professional Staff

STEPHEN L. CROW

W. DAVID GWALTNEY

W. PROCTOR JONES (Minority)

(II)

CONTENTS

THURSDAY, FEBRUARY 9, 1984

	Page
Department of the Army:	
Corps of Engineers—Civil	1

TUESDAY, FEBRUARY 21, 1984

Department of the Interior:	
Office of the Secretary	205
Bureau of Reclamation	229

WEDNESDAY, FEBRUARY 29, 1984

Tennessee Valley Authority	371
----------------------------------	-----

(III)

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1985

THURSDAY, FEBRUARY 9, 1984

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:10 a.m. in room SD-192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.
Present: Senators Hatfield, Johnston, Byrd, and Burdick.

DEPARTMENT OF THE ARMY

OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

OFFICE OF THE CHIEF OF ENGINEERS—CIVIL

STATEMENT OF WILLIAM GIANELLI, ASSISTANT SECRETARY OF THE
ARMY (CIVIL WORKS)

ACCOMPANIED BY:

LT. GEN. J. K. BRATTON, CHIEF, CORPS OF ENGINEERS
MAJ. GEN. JOHN F. WALL, DIRECTOR, CIVIL WORKS
BORY STEINBERG, CHIEF, PROGRAMS DIVISION, CIVIL WORKS

OPENING REMARKS

Chairman HATFIELD. The hearing will please come to order. The purpose of our meeting today is to review the fiscal year 1985 budget request for the programs and activities of the Army Corps of Engineers.

As our first witness, we welcome Mr. William Gianelli, Assistant Secretary of the Army for Civil Works.

Mr. Secretary, we look forward to your overview of the Corps' budget request. In addition, we are pleased to have with us Lt. Gen. Joseph K. Bratton, Chief of Engineers; Maj. Gen. John F. Wall, Director of Civil Works, and Mr. Bory Steinberg, the Chief of the Programs Division.

These gentlemen are accompanied by officers and professional staff members of the Corps.

Mr. Gianelli, your full statement will be included in the record, and you may proceed as you wish in either summarizing or highlighting your testimony.

Mr. GIANELLI. Thank you very much, Mr. Chairman. I am pleased to appear before your subcommittee today to discuss the Army's civil

works program and fiscal year 1985 budget recommendations. As the chairman has indicated, I have with me the Chief of Engineers on my left, Lt. Gen. Joseph K. Bratton; the Director of Civil Works, Maj. Gen. John F. Wall on my right; and the Chief of Programs, Mr. Bory Steinberg, on my extreme left. These gentlemen are all with me and will assist in presenting testimony and answering any questions which the subcommittee may have following our presentations.

PREPARED STATEMENT

As you indicated, Mr. Chairman, I would like very much to have my complete statement and also that of General Bratton placed in the record of these hearings. I would like to summarize portions of my complete statement, and I ask that the Chief be permitted also to summarize his statement, following which we will be available to answer any questions you that you might have.

Chairman HATFIELD. Thank you. It will be included in the record at this point.

Mr. GIANELLI. Thank you very much.

[The statement follows:]

STATEMENT OF WILLIAM R. GIANELLI

I. INTRODUCTION

I am pleased to appear before your subcommittee today to discuss the Army's Civil Works Program and FY 1985 Budget recommendations. The Chief of Engineers, Lieutenant General Joseph K. Bratton, the Director of Civil Works, Major General John F. Wall, and the Chief of Programs, Bory Steinberg, are with me and will assist in presenting testimony.

With your permission, Mr. Chairman, I would like to proceed by asking that my complete statement and that of General Bratton be placed in the record of these hearings. I would like to summarize portions of my complete statement, and I ask that the Chief be permitted also to summarize his statement, following which we will be available to answer the subcommittee's questions.

My statement addresses these topics:

- > FY 1985 Budget Overview and Summary;
- > Pending Legislation and Its Relationship to the FY 1985 Budget;
- > Jobs Bill;
- > Preservation and Restoration of Project Productivity;
- > Ocean Disposal of Dredged Material;

- > Regulatory Reform;
- > Recreation Facilities at Projects under Construction;
- > Private Financing of Public Recreation Facilities at Corps Projects;
- > Water Supply Contracts;
- > Continuing Authorities Program;
- > Mount St. Helens; and
- > Role as Federal Engineer.

II. FY 1985 BUDGET OVERVIEW AND SUMMARY

The net FY 1985 budget request for the Civil Works Program totals \$2.491 billion. This net request takes into account offsetting receipts of some \$233 million. The \$233 million is, in large part, an indication of the revenue which could be generated if some reasonable level of cost recovery is enacted to cover a portion of the cost of deep water ports, inland waterways and Corps recreational facilities. The gross request thus amounts to \$2.724 billion, which is about three percent above the FY 1984 appropriation.

The FY 1985 budget is a responsible one with a balanced program and a workload contingent upon increased participation by non-Federal interests. Basically, funds for the Construction, General,

Operation and Maintenance, General, and the Flood Control, Mississippi River and Tributaries, appropriation accounts are comparable to their appropriation levels for FY 1984. The \$874 million for Construction, General, will maintain a no delay ongoing construction program; the \$1.297 billion for Operation and Maintenance, General, will be sufficient to operate and maintain Corps projects, including deep draft harbors and inland waterways as justified by the benefits to projected commerce; and the \$304 million for Flood Control, Mississippi River and Tributaries, will meet scheduled commitments in the budget year.

At the same time, money for preconstruction planning and engineering programs funded under General Investigations continues to be limited in light of the stalemate on project cost sharing and financing which has stymied new construction starts. The budget request for these programs including surveys and feasibility studies is nonetheless comparable to last year's budget request. The FY 85 budget request reflects an objective of not funding the planning and engineering for projects unless there is some indication that the project will be proceeding to construction in the near future. It also reflects a desire not to create a buildup of new construction start candidates which could not be initiated in the next few years given the current budgetary deficits.

III. PENDING LEGISLATION AND ITS RELATIONSHIP TO THE BUDGET

In the first session of the 98th Congress, water resource development authorization bills have been formulated in the House and Senate. Although the two bills, H.R. 3678 and S. 1739, differ substantially, they nonetheless address water project financing and cost recovery. Two weeks ago, on January 24th, President Reagan set forth the Administration's policy on water project financing and cost sharing. The visibility given water project financing and cost sharing by the President and Congress creates a climate in which it should be possible to develop and enact authorizing legislation which would provide the necessary consistency, stability and certainty to allow orderly progress in water development. Early agreement on financing and cost sharing policies which reflect current economic realities is the key to moving ahead on productive water projects.

Neither H.R. 3678 nor S. 1739, in their present forms, provides for any recovery of O&M costs for either deep-draft or inland navigation in FY 1985. Thus, the \$200 million in navigation user fee receipts envisioned in the FY 1985 budget will not be realized under either of these bills.

The FY 1985 budget provides for 14 new construction starts with a total project cost of \$631

million. Funds totaling \$32 million are budgeted in FY 1985 to finance the second-year requirements of the 12 projects which we proposed in the FY 1983 and FY 1984 budgets, and \$3 million is budgeted to finance the first-year requirements of two new starts for FY 1985. The financing and cost sharing on all 14 new construction starts are consistent with the policy announced by the President. I urge the subcommittee to allow the Corps of Engineers to start construction in FY 1984 of the 12 FY 1983/FY 1984 new starts in accord with the agreements which have been negotiated with the local project sponsors.

The subcommittee will recall that one of our earlier new start proposals, Bradley Lake in Alaska, has been deauthorized at the State's request so that the project may proceed as a non-Federal project. In addition, the local sponsor of the Bodega Bay Project has recently decided to proceed with construction of the project on its own because of uncertainty regarding the availability of Federal funds. To that end, two contracts have been awarded by Sonoma County. The local sponsor, however, would like to preserve a Federal interest in the project. It is ironic that delay in Federal action on these projects based on concerns about the ability of non-Federal interests to finance new work has resulted in non-Federal interests deciding to proceed without Corps of Engineers involvement.

The FY 1984 supplemental new starts bill, H.R. 3958, as reported by the Senate Appropriations Committee, although a step in the right direction by reducing the number of projects from the House level of 43 to 27, is nonetheless unacceptable to the Administration without new cost sharing arrangements being enacted because the Administration is extremely concerned about the multibillion dollar Federal cost of the 27 Corps and Bureau of Reclamation projects in the bill. The total Federal cost, under traditional cost sharing and considering inflation, of the 24 Corps projects in the Committee's bill is \$3.8 billion.

IV. JOBS BILL

The Corps of Engineers, through its Civil Works Program, was assigned significant responsibilities last year under the Productive Employment Appropriations Act of 1983, the Jobs Bill. Funds appropriated by the "Jobs Bill" for the Corps amounted to \$389 million. The funds were made available to increase employment and to meet emergency requirements and remedy damages and flooding resulting from disastrous storms and rains. For the information of the subcommittee, I am attaching a table which shows, for each of the three labor intensive appropriation

titles, a breakdown of obligations and expenditures through the end of September 1983 as well as the number of jobs created.

Implementation of the Jobs Bill involved a substantial management and administrative effort to award approximately 700 contracts within a few months. In addition to expediting work on the continuing construction program and new starts under the Continuing Authorities Program, a reduction was made in the number of items at existing projects in need of repair or maintenance. Jobs Bill funds allocated under the Operation and Maintenance, General, appropriation title included \$65.8 million for dredging, \$71.3 million for structural repairs, \$12.4 million for road repairs, \$3.7 million for natural resources management, and \$2.8 million for boundary line maintenance and surveys. In addition, \$8.1 million was allocated for hired labor to perform productive work at Corps locks, dams and reservoirs. Many contracts were awarded to minority business enterprises under the Section 8A provisions. Jobs Bill money also was utilized to good advantage to dredge material deposited in the Toutle and Cowlitz Rivers in Washington as a result of the eruption of Mount St. Helens. I will address this later.

V. PRESERVATION AND RESTORATION OF PROJECT
PRODUCTIVITY

This Nation has invested many billions of dollars in developing our water resources. Continued realization of the maximum possible benefits from numerous existing structures requires management initiatives as well as a continuing commitment to their operation and maintenance to the extent appropriate with their current productivity. Initiatives funded in the FY 1985 budget to preserve and restore the productivity of past investments fall into three areas: major rehabilitation, dam safety and correction of project deficiencies.

Major Rehabilitation

The FY 1985 budget includes \$12.7 million to start the rehabilitation of five projects, including three navigation breakwaters, one navigation dam, and electric equipment at one powerhouse. The total estimated cost of this work is \$86 million. These projects need rehabilitation, and I believe the expenditures we are requesting will serve to extend the useful life of well-tested and proven public works.

Dam Safety

The subject of dam safety continues to be of great concern to the Administration. While we do not

believe that any of the Corps of Engineers' dams are in imminent danger of failure, we know that the risks of failure from extremely large floods and seismic events might be, in some cases, greater than were considered in the original designs. Experience in dam construction and technological advances since some of these structures were completed have caused changes to be made in design criteria used for modern dam construction.

Although preliminary analyses using modern criteria have not been completed for all Corps dams, information to date shows that spillways account for about 80 percent of the potential problems and seismic questions for the balance. We can now conclude that additional spillway capacity should be provided at some of our existing dams and that at some locations modifications would be prudent to reduce the risk in the event of large earthquakes.

Because this subject is important and because it does have budgetary implications, we need to develop design criteria which not only consider hydrologic data but evaluate the downstream risk in determining what modification to spillways is warranted. The determination of these design criteria should take into account the experiences and practices used at both Federal and non-Federal dams because the acceptable level of risk under similar circumstances should be the same regardless of ownership.

In the 1985 budget we have included money to reduce the risk at two dams. The total cost of such work is \$8.6 million, of which \$1.7 million would be used in 1985. The Administration's policy is that the cost of safety work should be borne by the Federal Government. However, if additional economic benefits result from modifications of dams, appropriate cost sharing would be allocated among beneficiaries.

Correction of Project Deficiencies

The budget includes \$10.9 million to continue construction on two design deficiency correction projects and \$250,000 to start design on one such project. The total estimated cost of the work is \$27.5 million. In each case these expenditures represent economically justified capital improvements in the interest of restoring the functions and assuring productivity of existing works built by the Corps. We believe that the evolution of our understanding of the site-specific problems associated with these projects and the evolution in the engineering science will enable us, through the investments we are proposing, to realize fully the intended project outputs.

VI. OCEAN DISPOSAL OF DREDGED MATERIAL

The FY 1985 Budget provides \$449 million for dredging to maintain adequate depths in our Nation's

waterways and harbors. The cost of dredging is significant and steadily rising. We are very much concerned about the trend to require disposal of dredged material at great distances in the ocean in the absence of scientific evidence suggesting that there are benefits commensurate with the costs of such efforts. Regardless of whether the extra costs of ocean disposal are to be borne by Federal or non-Federal interests, it is important that all of us assess realistically the cost of ocean disposal before we adopt this procedure. In this connection, the committee, in its report on the FY 1984 Energy and Water Development Appropriation Act, gave its concurrence to ocean disposal at a distance of 30 miles at site 5 for the Tampa Bay Harbor project. The subcommittee is urged to take a closer look at such expenditures because the net effect of accepting unsupported, costly proposals to dispose of dredged material ever further out to sea would be less available money for other water projects. In short, unless there is a scientific or technical basis for doing so, we believe it is unwarranted to incur the added costs implicit in the tendency to dispose of dredged materials at ever increasing distances in the ocean. The additional cost might also result in the infeasibility of some needed projects. The Chief of Engineers will provide additional information on this important tradeoff issue.

VII. REGULATORY REFORM

Regulatory reform was an early goal of this Administration. On May 7, 1982, the Presidential Task Force on Regulatory Relief issued a directive to the Corps of Engineers on various aspects of its regulatory program. The directive included measures to speed up the permit process, expand the use of general permits, reduce duplicative and overlapping procedures, give more authority and the responsibility to the states, and clarify the scope of Clean Water Act jurisdiction.

We have already implemented a number of reforms that could be handled administratively. For example, to speed up process time, interagency coordination agreements have been revised to reduce a four-step, four-level decision process to a one-level review process, and many in-house procedures have been modified. Interim rules were published in July 1982, and additional proposed regulations designed to complete our regulatory reform effort were published in May 1983. In December 1982, sixteen environmental groups brought suit against the July 1982 regulations. We worked very hard with those environmental groups and reached a tentative settlement which calls for publication of proposed rules to address their concerns. After those proposals have been subjected to public review, we plan to issue final regulations.

The nationwide permits, along with our regional and state general permits, have been a cornerstone in our reform efforts. These permits are authorizing over one hundred thousand activities annually without the red tape of formally processing individual permits. In addition, we have been able to take advantage of existing state and local regulatory programs by developing general permits around them.

I would like to stress that the result of our regulatory reforms to date is that we have maintained the environmental standards of the program while reducing the average permit processing time by 40 percent and reducing the backlog of applications awaiting action by 60 percent. In addition, for the first time in many years, the Army, under the Section 404 interagency coordination agreements, has more direct responsibility and accountability in the decisionmaking process which gives the public, the Congress and the Administration a clear focus for program management.

Just as importantly, it is estimated that our reforms are saving millions of dollars for landowners who are able to move more expeditiously in the use of their own property. In addition, the benefits of water projects can be realized much faster when citizen-beneficiaries of those projects are able to proceed expeditiously with project-related development.

VIII. RECREATION FACILITIES AT PROJECTS UNDER
CONSTRUCTION

Despite the low priority of recreation compared to that of commercial navigation, water supply, hydropower, and flood damage reduction, we have been able to allocate sufficient funds to address past commitments and provide an acceptable level of recreation facilities during construction of Corps projects which were authorized prior to 1965. About \$22 million will have been expended through FY 1984, and an additional \$25 million is included in the FY 1985 budget. All work is being undertaken at 100 percent Federal cost, and is programmed to be completed by FY 1988. The total Federal cost is about \$86 million.

IX. PRIVATE FINANCING OF PUBLIC RECREATION FACILITIES
AT CORPS PROJECTS

Another initiative in this area involves consideration of new contractual arrangements to attract private capital for development of public recreation areas at Corps reservoirs. We believe that it is possible to arrange long-term leases with private interests for private development and use of limited areas of project lands in return for the private development and maintenance of public

recreation facilities at no taxpayer expense. Of course, such arrangements must insure that taxpayers receive fair market value for private use of government lands. In this effort, we are seeking to achieve a proper balance among public use of project lands and waters, availability of public recreational facilities, and reduction of taxpayer financial costs for water resource development. The ultimate goal is to obtain maximum benefit for the American public from the Federal investments that have been made and will continue to be made in water resource development.

X. WATER SUPPLY CONTRACTS

We have taken three steps to standardize the provisions of municipal and industrial water supply contracts which will result in a more equitable recovery of Federal costs of conservation storage in Corps reservoirs.

First, the Corps will assure that Federal investments in municipal and industrial storage will be repaid within 50 years of first use for water supply purposes as specified in the Water Supply Act of 1958. Previously, water supply contracts provided for repayment over 50 years from the date of each successive contract for additional segments of water supply storage, resulting in some payment periods

extending far beyond 50 years from the date of first use of projects for water supply purposes.

Second, we are now requiring that local sponsors assume their operation, maintenance and replacement responsibilities for specific water supply facilities on the date such facilities are available for use, rather than on the date of first use. This shifts the burden of such costs from the Federal Government to project beneficiaries at a more appropriate time and removes an incentive for local sponsors to delay usage of completed projects.

Third, we are now requiring that non-Federal shares of replacement and rehabilitation costs associated with water supply storage be repaid within the construction periods of such construction activities.

These steps will improve the return on Federal investments and promote equity in the utilization of municipal and industrial water supply storage.

XI. CONTINUING AUTHORITIES PROGRAM

General Bratton testified last year concerning efforts to restructure the Continuing Authorities Program. This has now been accomplished. The restructured program features a five-step process: (1) initial appraisal; (2) reconnaissance phase; (3) detailed planning phase; (4) plans and specifications;

and (5) project implementation. The first two steps are to be accomplished at full Federal expense; the third step would be shared equally between the Corps and a non-Federal entity, and the last two would be shared on the same basis as a comparable, specifically authorized large project.

Management of the restructured Continuing Authorities Program is analogous to that of congressionally authorized studies and projects. The goal is the same: a more effective and efficient planning process and a more effective use of planning and construction funds.

We are requesting \$36.7 million in FY 1985 for new and/or continuing planning and construction under the six individual programs. These funds will allow the Corps to be responsive to the priority water needs of local communities.

XII. MOUNT ST. HELENS

As we reported to the subcommittee last year, the Corps responded quickly and effectively to the crises created by the eruption of Mount St. Helens. During 1980 and 1981, the Corps of Engineers expended over \$265 million in order to minimize damage and property losses and facilitate recovery in those areas adversely affected by the extraordinary conditions. The experiences of the last year have been less

severe, and we have been able to focus our attention on the long-range management and protection of this area. Expenditures have leveled off to \$29 million and \$34 million in 1982 and 1983, respectively; thus nearly \$1/3 billion has been spent in total. The people of the lower Cowlitz Valley are continuing to be protected from flood damage.

The pumping plant at Spirit Lake continues to operate and has allowed the Corps to maintain the water elevation at a safe height. Indeed the level today is lower than when pumping began in November 1982, and over 130,000-acre-feet -- the equivalent of over 40 feet of prevented pool raise -- have been withdrawn.

In the case of potential flood problems created by sediment deposited in the Cowlitz and Toutle Rivers, the Corps continues its excavation and dredging programs. Using \$16.9 million in 1983 Jobs Bill funds, over 6 1/2 million cubic yards were removed. Data from an extensive monitoring program including cross sectional analysis at 50 locations on the Cowlitz reveal that 100-year protection presently exists at the major developed areas of Longview and Kelso. Furthermore, \$6.5 million is being spent this winter to remove sediment in the area of Castle Rock so that the maximum possible protection can be provided.

The Comprehensive Plan was completed and submitted to the President on November 10, 1983. It has been widely distributed, and interested parties have had an opportunity to present their views both at public meetings and in writing. We are presently reviewing the comments that were received by the Corps. Clearly, elimination of the danger from a possible failure of the debris dam at Spirit Lake is of the highest priority. Accordingly, a final decision on the appropriate outlet for the lake will be made in the near future; construction should begin this summer.

Detailed planning is underway to better define the alternatives for the construction of retaining structures on the Toutle River to trap the sediment above the more developed areas. The Corps is proceeding on its feasibility report on a permanent solution to the sediment problem. The report is scheduled for completion later this fiscal year.

XIII. ROLE AS FEDERAL ENGINEER

Traditionally, the Corps has accepted missions from agencies of this and other national governments and states which would enhance and/or maintain the Corps' technological capability for planning, design, construction, or mobilization readiness. In fact, the

Corps has standing agreements to provide services to several Federal agencies. These include the Department of Energy, NASA, the National Park Service, the Federal Insurance Administration, the National Science Foundation, and EPA.

Since FY 1979, for example, the Corps has assisted EPA, involving an annual effort of about 500 manyears, in execution of its waste treatment facilities construction grants program. Work has included facilities design reviews, constructability reviews, and construction management. More recently the Corps has assisted EPA in design and construction of solutions to toxic waste problems under the Superfund law. In view of the scope and seriousness of such problems nationwide, the Corps role in solving them is expected to continue over the next several years.

The Corps also assists the International Boundary and Water Commission, numerous states and the District of Columbia. Assistance to the District for operation and maintenance of the Washington Aqueduct, presently requiring about 300 workyears annually, is expected to continue. Finally, the Corps assists foreign governments, through the Departments of Defense and State, in developing projects considered to be in our national interest. The performance of these missions by the Corps has served the Nation well.

Mr. Chairman, let me close by urging again that the subcommittee allow our new starts to proceed in accord with the agreements that have been carefully negotiated with the local project sponsors. We have today many problems facing the water resources development community -- serious problems such as rehabilitation of existing facilities, dam safety, regulatory reform, Mount St. Helens, and many others. I believe, however, that none of these is any more important than our working together to break the existing logjam in the construction of good, sound water projects which can withstand the screening test of non-Federal financing and cost sharing. We have projects which are ready to go if Congress approves, and it is important that we move ahead on these projects so that the people waiting on them can begin to benefit. It is also important that we signal the water resources development community that it is possible once again to build water projects.

This completes my statement, Mr. Chairman.

U. S. Army Corps of Engineers

Jobs Bill Report as of September 30, 1983

<u>Appropriation Title</u>	<u>Total Amount Available (\$000)</u>	<u>Obligations (\$000)</u>	<u>Expenditures (\$000)</u>	<u>Jobs Created</u>
Construction, General	85,000	66,785	24,845	2,118
Operation and Maintenance, General	164,000	163,742	101,610	6,856
Flood Control, Mississippi River and Tributaries	140,000	93,457	58,847	5,309
Total	389,000	323,984	185,302	14,283

BUDGET OVERVIEW AND SUMMARY

Mr. GIANELLI. First of all, related to the fiscal year 1985 budget overview and summary. The net fiscal year 1985 budget request for the civil works programs totals some \$2.491 billion. This net request takes into account offsetting receipts of some \$233 million. I might say, the \$233 million is, in large part, an indication of the revenue which could be generated if some reasonable level of cost recovery is enacted to cover a portion of the deep-water ports, inland waterways, and the Corps' recreational facilities. The gross request thus amounts to \$2.724 billion, which is about 3 percent above the fiscal year 1984 appropriation.

PENDING WATER POLICY LEGISLATION

Moving on quickly to pending legislation and its relationship to the budget, Mr. Chairman. In the first session of the 98th Congress, water resource development authorization bills have been formulated in both the House and the Senate. Although the two bills—H.R. 3678 and S. 1739—differ substantially, they nonetheless address water project financing and cost recovery. Two weeks ago, on January 24, President Reagan set forth the administration's policy on water project financing and cost sharing. The visibility given water project financing and cost sharing by the President and the Congress creates a climate, I believe, in which it should be possible to develop and enact authorizing legislation which would provide the necessary consistency, stability, and certainty to allow orderly progress in water development. Early agreement on financing and cost-sharing policies which reflect current economic realities, we believe, is the key to moving ahead on productive water projects.

NEW CONSTRUCTION STARTS

The fiscal year 1985 budget provides for 14 new construction starts with a total project cost of some \$631 million. Funds totaling \$32 million are budgeted in fiscal year 1985 to finance the second-year requirements of the 12 projects which we proposed in the fiscal year 1983 and fiscal year 1984 budgets, and \$3 million is budgeted to finance the first-year requirements of 2 new starts for fiscal year 1985. The financing and cost sharing on all new 14 new construction starts are consistent with the policy announced by the President. I would certainly urge the subcommittee to allow the Corps to proceed to start construction in fiscal year 1984 of the 12 fiscal years 1983-84 new starts in accord with the agreements which have been negotiated with the local project sponsors.

If the Congress and the administration agree on cost-sharing arrangements which are different from those negotiated, we will adjust those negotiated to conform to the new arrangements which the Congress and the administration might agree to.

EMERGENCY EMPLOYMENT BILL

The Corps of Engineers was assigned significant responsibilities last year under the Productive Employment Appropriations Act of 1983, the jobs bill. Funds totaling \$389 million were made available to increase employment and to meet emergency requirements and remedy damages and flooding resulting from disastrous rains and storms. Approximately 700 contracts were awarded within just a few months. Work was expedited on the continuing construction program and on new starts under the continuing authorities program. A reduction was made in the number of items at existing projects in need of repair or maintenance, and sediment was removed from the Toutle and Cowlitz Rivers in the State of Washington. I will address, a little bit later, the Mount St. Helens problem.

OCEAN DISPOSAL OF DREDGED MATERIAL

Moving on, Mr. Chairman, to the subject of ocean disposal of dredged material. The cost of dredging our Nation's waterways and harbors is very significant and is steadily rising. We are very much concerned about the trend to require disposal of dredged material at great distances in the ocean in the absence of scientific evidence suggesting that there are benefits commensurate with the costs of such efforts. The subcommittee, I would hope, would take a closer look at such proposed expenditures, because the net effect of accepting unsupported, costly proposals to dispose of dredged material ever further out to sea would be that there would be less money available for other water projects. It would also have a direct effect on the economics of a project and could result in the infeasibility of some needed projects. In other words, if you increase the cost of moving the material out further, you may very well affect the benefit-cost ratio and very well may adversely affect the feasibility of some very badly needed projects. The Chief of Engineers will provide additional information on this important tradeoff issue.

REGULATORY REFORM

Regulatory reform was an early goal of this administration. A number of reforms have been implemented administratively. The nationwide permits, along with our regional and State general permits, have been a cornerstone in our reform efforts in connection with section 404 of the Clean Water Act. These permits are authorizing over 100,000 activities annually without the red tape of formally processing individual permits. The result of our regulatory reforms to date is that we have maintained the environmental standards of the program, we believe, while reducing the average permit processing time by 40 percent and reducing the backlog of applications awaiting action by some 60 percent.

MOUNT ST. HELENS

Let me move quickly to the subject of Mount St. Helens, in which, I know, the chairman is extremely interested.

As we reported to the subcommittee last year, the Corps responded quickly and effectively to the crises created by the eruption of Mount St. Helens. During the last 3½ years, the Corps of Engineers has expended over one-third of a billion dollars in order to minimize damage and property losses, facilitate recovery, and provide continuing protection in those areas adversely affected by the extraordinary conditions created by that eruption. The experiences of the last year have been less severe and we have been able to focus our attention on the long-range management and protection of this area.

The comprehensive plan, which looks at the long-range solution to the problems of Mount St. Helens, was completed and submitted to the President on November 10, 1983. It has been widely distributed, and interested parties have had an opportunity to present their views, both at public meetings and in writing. We are presently reviewing the comments received by the Corps. Clearly, elimination of the danger from a possible failure of the debris dam at Spirit Lake is of the highest priority. Accordingly, a final decision on the appropriate outlet for the lake will be made in the very near future. As a matter of fact, I suspect the decision will be made before the end of this month, and construction on the outlet should begin this summer.

Detailed planning is underway to better define the alternatives for the construction of retaining structures on the Toutle River. The feasibility report on that part of the problem will be completed later this fiscal year.

ROLE OF FEDERAL ENGINEER

Lastly, let me move on quickly to the subject of the role of the Corps as the Federal engineer. Traditionally, the Corps has accepted missions from agencies of this and other National governments and States which would enhance and/or maintain the Corps' technological capability for planning, design, construction, or mobilization readiness. The Corps has standing agreements to provide services to several Federal agencies. These include the Department of Energy, NASA, the National Park Service, the Federal Insurance Administration, the National Science Foundation, and the Environmental Protection Agency. The Corps assists foreign governments through the Department of Defense and the State Department in developing projects considered to be in our national interest. I think the performance of these missions by the Corps has certainly served the Nation well.

Mr. Chairman, this completes my summary. If the complete statement of General Bratton could be placed in the record of the hearing, then he could proceed with his summary and then we will be available to answer your questions. Thank you very much.

Chairman HATFIELD. Thank you, Mr. Secretary. It will be included in the record following his oral remarks.

General Bratton, you may proceed.

STATEMENT OF GENERAL BRATTON

General BRATTON. Mr. Gianelli has presented an overview of our program for fiscal year 1985 and identified some of the operational and programmatic changes being made. I would like to touch on our program accomplishments briefly, including the use of the jobs bill funds during the past and current years; highlight a few of the programs in our new fiscal year 1985 budget; provide an update on the status of our dredge fleet, our response to emergencies, and our manpower resources. I would like to add, then, a few comments on the Corps as a Federal engineer and its potential role in mobilization and its use as an agent in acquiring and operating needed public works.

PROGRAM ACCOMPLISHMENTS

With respect to the past accomplishments of the program. Our outlays in the last fiscal year, 1983, totaled \$2.9 billion, with both the construction and the project operation and maintenance programs exceeding the \$1 billion level. The outlays for fiscal 1984 should slightly increase, reaching about \$3.1 billion, with much of the increase coming from the completions of the jobs bill contracts which were awarded last year and early in this fiscal year.

EMERGENCY EMPLOYMENT BILL

Regarding the jobs bill. Our objectives were to maximize the number of jobs generated and to award as many contracts as we could by the end of fiscal 1983. We also used some of the funds for remedial work including flood emergency repairs. Our success was exemplified by the fact that about 83 percent of the appropriated \$389 million was obligated by the end of fiscal 1983, with funds allocated to projects in virtually every State. Moreover, we estimate that almost 14,300 jobs were created through the award of our contracts.

CONSTRUCTION BUDGET REQUEST

I would like now to highlight a few of the major programs and activities included in the fiscal year 1985 budget request. First, construction. The number of active regular construction projects under the construction, general, account continues to decline as we concentrate on bringing our projects on line and in the absence of new starts. With adjustments for completions, the project count has dropped from 139 being funded in fiscal 1984 to the 120 projects proposed for funding in fiscal 1985. Included in the 1985 request of \$874 million are 2 new starts and 12 other projects that were budgeted as new starts in fiscal years 1983 and 1984 and are now on hold, pending congressional action in the supplemental bills of fiscal 1984.

Similarly, the fiscal 1983 backlog of small projects available for construction under the continuing authorities program was significantly

reduced when we were able to complete or place under construction, primarily with jobs bill funds, over 140 small projects in fiscal 1983 and schedule for construction an additional 47 in fiscal 1984. As a result, the fiscal 1985 request is sufficient to maintain a good balance between planning and construction. I might note that funding for construction new starts accounts for about a third of the small project program's budget and is mostly for responding to flood control and emergency streambank problems.

OPERATIONS AND MAINTENANCE REQUEST

Regarding operation and maintenance. For the second year running, our budget for operations and maintenance, general, is the largest among all our appropriations requests. At \$1.297 billion, the fiscal 1985 request is about 9 percent above last year's appropriations. Overall, the budget request provides sufficient funds for the continued operation and maintenance of our projects, including shallow-draft and deep-draft navigation projects and the inland waterways. As in fiscal 1984, we again are proposing to add four projects to the three already funded for caretaker status because of the lack or reduced level of commercial traffic moving on these waterways.

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT

For the Mississippi River and tributaries project, the budget request of \$304 million is slightly higher than that appropriated for fiscal 1984. The request permits a normal level of operations and maintenance and a continuation of the survey and construction schedules. This includes the Old River Auxiliary Control Structure, which is still scheduled for completion in fiscal 1986. Funds are also provided to initiate the correction of seismic deficiencies at the Sardis Dam in Mississippi under our dam safety assurance program.

GENERAL INVESTIGATIONS

Similarly, the general investigation account is budgeted at a level comparable to that recommended last year. The request of \$118 million continues to reflect the policy of constraint with emphasis on funding those studies and those engineering efforts most likely to result in early construction of regular Corps projects. Included in the 1985 budget are the first year's share of work on 21 feasibility phase studies. These studies are follow-ons to some of the reconnaissance studies funded in 1984. Also budgeted is \$20 million for the continuation of the planning and engineering on 36 projects including 3 new starts and \$7 million for the 15 ongoing projects and 2 new starts under the advanced engineering and design program.

DREDGE FLEET

I would like now to give a short update on the status of the Corps dredge fleet. At this time, our Corps dredge fleet consists of four hopper dredges and nine nonhoppers. Concurrent with the retirement of 12 Corps dredges over the past 6 years is the increased reliance on the

private sector to perform our dredging. In fiscal 1984, we estimate that over 80 percent of our total maintenance dredging and 100 percent of our new work or construction dredging will be done by contract.

At the same time, we are in the process of establishing a reserve fleet of industry hopper dredges. Agreements for the priority use of seven dredges already have been signed, and proposals for inclusion of five other operational hopper dredges in the reserve fleet have been received. Cost and pricing data, as well as negotiations, are expected to be completed for these five soon. Once the hopper dredge reserve fleet program is in place and the reserve fleet capability demonstrated, we will then move toward establishing a similar program for the nonhopper fleet.

DISPOSAL OF DREDGED MATERIAL

One other note on dredging. Currently, some 135 designated ocean disposal sites are required for the maintenance of some 115 harbors, channels, and coastal waterways. There are, however, efforts underway to have us move our disposal sites farther out into the ocean. Transporting these materials extended distances out into the ocean has the potential for significantly increasing the cost of present maintenance dredging. The added cost could affect future decisions on possible improvements to harbors and channels. The impact from such a move was recently quantified for two separate project areas—New York Harbor and Tampa Bay. Moving some 94 miles further out, as proposed by others, would add about \$85 million to the annual dredging costs of \$27 million for the New York Harbor area. Similarly, at Tampa Bay an increase of 12 miles would require an additional \$40 million to complete the project's deepening and to maintain it for 50 years.

RESPONSES TO NATURAL DISASTERS

Regarding natural disasters. Funding for flood control and coastal emergencies under Public Law 84-99 has allowed the Corps to provide a rapid response to both natural and manmade disasters. Our budget request for fiscal 1985 is for \$10 million, which is the same as the fiscal 1984 appropriation. A summary of what has been accomplished in this program over the last year and what we might face this spring may be warranted.

RECENT EMERGENCY RESPONSE ACTIVITIES

During the 7-month period December 1982 through June 1983, the Corps provided extensive local assistance in response to 16 major disaster declarations from FEMA. Sixteen individual States or territories were involved; five States more than once. These support activities were in addition to emergency operations at Corps projects and responses under our own Public Law 84-99 emergency authority.

Since June, the Corps has been involved in even more emergency response activities. These were to Hurricane Alicia in Texas and flood disasters in seven States. Emergency operations using operations and maintenance, general, funds were also undertaken to insure that navigation was maintained. The work included removal of a potential major

navigation hazard near Galveston, Tex., entrance channel due to Hurricane Alicia and the removal of a barge jammed against the gates of Holt Dam by flood flows on the Black Warrior River in Alabama. The need for major repairs and rehabilitation of flood damaged levees under Public Law 84-99 is expected later this spring.

POTENTIAL FLOODING

Recent rainfall has raised the possibility of future flooding in the Pacific Northwest and in the Central Valley of California. Two other areas have an even higher potential for flood problems this spring and summer. These are the Great Salt Lake and Utah Lake in Utah where, with record amounts of precipitation in November and December, the lake levels are extremely high. An inability to increase the channel capacity of the Jordan River between the two lakes may add to the potential flood hazards during the snowmelt and cause a recurrence of the flood conditions experienced last year, especially in the Salt Lake City area.

Significant amounts of snow also have fallen in many areas of the West. We are, therefore, monitoring the snow pack and coordinating on a continuous basis with the Bureau of Reclamation and the National Weather Service in three areas: In the upper basin of the Colorado River, where the snow cover ranges from 150 to 200 percent of normal; in the drainage basins of the Great Sale Lake and Utah Lake in Utah; and in the Sierra Nevada Mountains of the Sacramento and San Joaquin basins in California. Some headwater areas of the upper Mississippi River basin, as well as the Great Lakes area, also have heavy snow amounts on the ground, but it is too early to determine the relative impacts. Fortunately, snow cover elsewhere in the Nation is light.

MANPOWER

Turning to a different topic, that of manpower. To operate the Corps programs, our manpower ceiling for our fiscal 1985 civil works program is 28,896 full-time equivalent work-years, or only 39 work-years less than the 1984 ceiling. We are concentrating now on complying with the reduction of 1,629 full-time equivalents by the end of this year, fiscal 1984. We hope that this reduction can be achieved with minimal need to resort to a reduction in force.

ROLE OF FEDERAL ENGINEER

Our role as a Federal engineer has been touched on by Mr. Gianelli. I would like to expand very briefly. I think that this role reflects the value of a nationwide organization in place with proven reliability and engineering and construction management capabilities. For years we have responded to requests for technical assistance and construction management from other Federal agencies, States, and local entities and foreign governments. Standing agreements are in effect with a number of Federal agencies and additional agreements are under study. The Corps work in support of the Environmental Protection Agency is a

good example. We think there is great potential to capitalize on the professional experience and organizational expertise of the Corps in carrying out important Federal engineering and construction efforts.

ROLE IN NATIONAL MOBILIZATION

We have funds requested in the fiscal 1985 budget for mobilization efforts by the Corps. We have identified the need for a major construction effort as a pacing factor in a national emergency. This effort would apply to both military and industrial facilities. The Corps civil works organization would fill a key and vital role in conceiving and executing the engineering and construction efforts which would be needed to meet the surge of emergency demands.

CONCLUSION

In summary, our fiscal 1985 program is formulated to maintain a positive balance between commitments for our ongoing work and new starts. I choose to view with optimism the achievement of an agreement between the administration and Congress on the cost sharing and financing of new starts, particularly construction starts, enabling us to resume working with the States and local sponsors in developing needed and justified projects. The important factor is that we have cost-sharing consistency for the same project purpose among the Federal water resource agencies.

I am also encouraged by the prospect that the Corps, which I really believe to be an important national asset, may play a meaningful role in the expansion of our Nation's water resources and its economic infrastructure. The concerns being expressed for the rehabilitation of the country's transportation and water supply systems coincide with our concern for the rehabilitation of Corps structures and a revitalization of the waterways and ports. Certainly, the Corps has the engineering and construction expertise and the organizational capability that can and should be effectively utilized in a program of prudent, selective investment in the Nation's economic base in the decades immediately ahead.

Thank you very much, sir. That concludes my summary.

[The statement follows:]

STATEMENT OF LT. GEN. J. K. BRATTON

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

INTRODUCTION

Mr. Gianelli has presented an overview of our proposed program for FY 1985; identified operational and program changes being made to assure a more effective use of our manpower and dollar resources; and indicated the extent to which cost-sharing and financing is integral to our program in FY 1985 and the outyears. I first will review the accomplishments of the past and current years, and then provide more detailed information on the FY 1985 budget. A table summarizing the funding levels of the individual appropriation titles for the period FY 1983-1985 inclusive is attached for the Subcommittee's ready reference. I also will report on the status of our dredge fleet, our responsiveness to emergencies, and our manpower resources.

PROGRAM IMPLEMENTATION OF THE PAST TWO YEARS

Overview

Outlays for FY 1983 totaled \$2.9 billion with both the construction and the project operation and maintenance programs exceeding the \$1.0 billion level. An even higher level of expenditures is anticipated for FY 1984. Based on appropriations of some \$2.65 billion for FY 1984 plus carryover, we are anticipating that outlays will approximate \$3.1 billion -- about a seven percent increase over last year. Much of the increase will come from the completions of the Jobs Bill contracts (\$200 million) awarded in FY 1983 and early FY 1984.

Jobs Bill

In implementing the Jobs Bill, our objectives were to maximize the number of jobs generated and to award as many contracts as we could by the end of FY 1983. We also used some of the funds for remedial work including flood emergency repairs. The results show that we were successful: about 83 percent of the appropriated \$389 million was obligated by the end of the fiscal year and some 14,300 jobs were created.

Jobs Bill funds were allocated to projects in virtually every State. For

example, funds were allotted for construction of revetments and needed levee repairs on the Mississippi River Main Stem; for new construction items at Dale Hollow Lake, Tennessee; for channel alinement and emergency bank stabilization on the Red River in Arkansas and Louisiana; for structural maintenance at Abiquiu Dam, New Mexico and Garrison Dam, North Dakota; for essential maintenance dredging at on the Columbia River in Washington and Oregon and on the Great Lakes Harbors in Wisconsin, for flood related emergency work in the Mount St. Helens area in Washington, for work on sanitation improvement and cost-shared recreation development at Lakes in Georgia and on the Missouri Main Stem, and for Small Continuing Authority Flood Control projects in Kentucky and South Carolina.

Construction Program

Under our construction program in FY 1983, work continued on 147 specifically authorized projects, with remedial and other type work funded on an additional 24 projects. Completions included: 10 flood control projects, three multiple-purpose power projects, five navigation projects, one dam safety assurance project, four major rehabilitation projects, and a pilot water treatment project located here in Washington, D.C. on the Potomac River estuary. Total Federal investment in the 24 completed projects amounted to almost \$568 million. In FY 1984, 139 regular construction projects are being funded along with work on 24 other projects. Ten projects are scheduled for completion. The 10 projects include one beach erosion control project, three flood control projects, one project rectification, two navigation projects, and three major rehabilitation projects, for a total Federal investment of about \$168 million. In addition, almost 10 miles of levee improvements for the Mississippi River and Tributaries (MR&T) project are scheduled for completion. Under the Continuing Authorities Program for small projects, construction was initiated on 142 projects, 102 with Jobs Bill funds, in FY 1983 and we anticipate starting an additional 47 projects in FY 1984.

Studies Program

In our studies program, actions by the Division Engineers were completed on 50 preauthorization reports in FY 1983 and we expect to complete slightly

more in FY 1984. In addition, the follow-on planning and engineering work is being funded in FY 1984 for 58 projects, part of the 70 such projects which have been funded under our CP&E program since it was initiated with Congressional support in FY 1982. The CP&E work on 15 of the 70 projects will be completed by the end of FY 1984.

Operation and Maintenance Program

The scheduled activities and expenditure levels for the operation and maintenance program in FY 1983 and FY 1984 are essentially the same; the difference in outlays, \$1.1 billion for FY 1983 versus \$1.3 billion for FY 1984, reflects the added costs for new project elements coming on line and follow-on expenditures for late-awarded Jobs Bill contracts. Operation and maintenance of some 274 harbors and the inland waterways are being programmed at a level consistent with their commercial traffic requirements, with an average annual dredging requirement of 265 million cubic yards for the two-year period. Some emergency dredging was done in FY 1984 in Galveston Harbor as a result of Hurricane Alicia. In addition, two waterway projects were placed into caretaker status in FY 1983 and one other is being put into caretaker status in FY 1984 because of the lack of commercial traffic moving on these waterways.

The operation and maintenance of the over 350 flood control and multiple-purpose power projects continues at about the same level. The FY 1983 Jobs Bill gave us an opportunity to initiate needed remedial maintenance work, most of which had been programmed for accomplishment in future years.

Preliminary estimates by the National Weather Service indicate that flood damages in 1983 totaled between \$4 and \$5 billion nationwide. These estimates reflect the major flood events that were experienced in Utah, Colorado, Arizona, and California in the spring and summer, as well as flood events in the lower Mississippi Valley and Gulf States. During 1983, the Corps projects prevented an estimated \$23.2 billion in damages, nationwide -- a new record for Corps projects in a single year.

FY 1983 and FY 1984 Emergency Response Activities

During the seven month period, December 1982 through June 1983, the Corps also provided extensive local assistance in response to 16 major disaster declarations from FEMA. Sixteen individual States or territories were involved; five States more than once. These support activities were in addition to emergency operations at Corps projects and responses under our own P.L. 84-99 emergency authority. In the west, emergency assistance was provided in response to periodic coastal storms and related flooding on coastal streams; major rainfall flooding in the Sacramento and San Joaquin River basins; and record to near-record snowpacks which resulted in spring snowmelt and flood problems in Utah, Nevada, California, and Arizona. In the south and mid-west, four major flood events occurred with record to near-record flooding experienced on the lower Mississippi River, the lower Pearl River in Mississippi and Louisiana, and on the streams draining into Lake Pontchartrain in Louisiana. Record flooding also occurred in Arkansas on the Buffalo and White Rivers and in Missouri on the Meramec River. The recurrence of a new emergency situation developing before the previous response was completed imposed a tremendous burden on Corps field personnel, particularly those in the Lower Mississippi Valley and South Pacific Divisions. Many worked extended hours, seven days a week during the six month period to help the residents of the devastated areas, not only during the emergency but also during the follow-on recovery period.

Since June, the Corps has been involved in even more emergency response activities. Responses were made to Hurricane Alicia in Texas in August, flash flooding in Arizona, California and New Mexico in early October, flooding in northern Texas and Oklahoma in late October, and flooding in eastern Mississippi and western Alabama in mid-December. Emergency operations using Operation and Maintenance, General funds also were undertaken to insure that navigation was maintained. Work included removal of a potential major navigation hazard near the Galveston, Texas entrance channel, due to Hurricane Alicia, and the removal of a barge jammed against the gates of Holt Dam on the Black Warrior River in Alabama due to the December flooding. No major emergency flood fights occurred under P.L. 84-99; however, major repairs and rehabilitation of flood damaged levees in New Mexico and Oklahoma are

expected. Also, we have initiated Advance Measures activities in the Utah Lake, Utah area due to predicted high lake levels this spring. We are closely monitoring the extensive early snowpack in the West for potential problems this spring.

FISCAL YEAR 1985 PROGRAM

Summary

We are requesting a gross amount of \$2.724 billion for the Civil Works Program in FY 1985. This is about \$75 million, or about three percent, greater than the funds appropriated for FY 1984. The amount is adequate to meet all continuing requirements and includes funds for new starts in various programs. I will cover a number of the highlights of the budget at this time. Additional information on the FY 1985 Civil Works budget is provided in the Detailed Summary which is being submitted for the record.

Construction, General

The FY 1985 budget request for Construction, General is \$874 million which is a reduction of \$20 million from the adjusted FY 1984 appropriations. This request will permit us to maintain schedules, insofar as funding is concerned, for 106 regular construction projects, one reimbursement project, 11 ongoing major rehabilitation projects, and one dam safety assurance project. Funds are also included for two new construction starts, the continuing requirements for 12 of the FY 1983 and FY 1984 budgeted new construction starts that are on hold, pending FY 1984 Congressional action, and five commercial harbor projects for which additional engineering and design is continuing. Funding of the new construction starts reflects the cost sharing and financing proposals worked out between the local sponsors and the Department of the Army.

Continuing Authorities Program

The Small Projects Program under Construction, General is designed for quick response in assisting local interests to solve their water problems. As Mr. Gianelli discussed, the program was restructured, and all the modified

procedures are in place. These procedures provide a detailed and orderly process from the time a small flooding, beach erosion or navigation problem is identified. For example, our objective is to provide all planning funds to the District Engineer as soon as he requests them for both the reconnaissance and detailed project study phases, and for preparation of plans and specifications.

One other point. We reduced our FY 1983 backlog of small projects available for construction, utilizing funds from the FY 1983 Jobs Bill. In the aggregate, we completed, placed under construction, or scheduled for construction over 100 small projects utilizing about \$26 million of those funds. As a result, I believe that the \$36.7 million requested for FY 1985, up almost \$12 million from FY 1984, will be sufficient to provide a good balance between planning and construction. Formulation of the FY 1985 budget for the Small Projects Program was predicated on cost-sharing and financing that is comparable to that proposed for specifically authorized projects. Funding for construction new starts accounts for about a third of the budget request and is mostly for responding to flood control and emergency streambank problems.

Operation and Maintenance

For Operation and Maintenance, General, the FY 1985 request of \$1.297 billion is the largest appropriation in the Civil Works program for the second year running. It is also about \$107 million or 9 percent above last year's appropriation, although almost \$41 million of the increase is for activities previously funded under other appropriation titles.

The budget request provides sufficient funds for the continued operation and maintenance of our projects. Some \$722 million are needed for the continued operation and maintenance of shallow-draft and deep-draft navigation projects, including channels, harbors, and locks and dams -- both completed projects and new projects coming on line, such as the operation of three new locks on the Tennessee-Tombigbee and two new locks on the Ouachita and Black Rivers projects. As in FY 1984, we again are proposing to add four projects to the three projects already funded for caretaker status because their

commercial tonnage does not justify the continuation of regular operation and maintenance activities. Another \$454 million of the amount would be used for essential operation and maintenance of our completed flood control and multiple-purpose power project facilities, including new power generators coming on line at the Richard B. Russell and Cooper River projects. The remaining \$121 million is for protection of navigation, including our regulatory programs, for mobilization planning, and for four activities which, heretofore, were included under other appropriation titles.

Two of the four programs switched from other accounts, Recreation Facilities at Completed Projects and the new starts for Major Rehabilitation, were moved from the Construction, General account; a third, the Commercial Statistics on waterborne commerce program, was transferred from the General Expenses account; while the fourth includes activities previously financed in the Special Recreation Use Fees account. These accounting changes help to consolidate those programs that are directly related to, or are comparable to, other activities already funded under the Operation and Maintenance, General accounts.

The competition for limited dollars requires us to defer some maintenance of lower priority. This has caused us to intensify our effort to better define and characterize the makeup of our unmet maintenance program. We are now in the process of cataloging all unaccomplished maintenance and repair requirements -- identifying not only the economics and the scope of work involved but also the relative national priorities as determined by the functioning of a project and the severity of the problem. This procedure should facilitate our efforts to program and plan future maintenance requirements including major rehabilitations, and to develop a more responsive multi-year investment level.

Flood Control, Mississippi River And Tributaries (MR&T)

For the MR&T program, the \$304 million requested is an increase of \$3.52 million over the FY 1984 appropriations. The request is sufficient for normal operation and maintenance of facilities, and for continued survey and construction schedules consistent with prior year performance and historic funding experience. Some \$64 million is budgeted for work on the Old River Auxiliary Control Structure, one of our priority projects, which is continuing on schedule toward completion in FY 1986. One new start is included in the MR&T budget request, the initiation of remedial measures at Sardis Dam in Mississippi under the Dam Safety Assurance program.

General Investigations

The General Investigations request of \$118 million in FY 1985 is an increase of about \$8 million from last year's budget request. Half of the increase is required to continue planning on the permanent solution to the problems caused by the eruption of Mount St. Helens. Detailed planning will be conducted on the alternative selected to control the massive sediment movements and related environmental studies. The rest of the budget continues to reflect our policy of emphasizing those studies most likely to result in early construction of traditional Corps projects. The budget request for surveys includes \$2.9 million as the Federal share of the first year's work on 21 feasibility phase studies. These feasibility phase studies are follow-ons to some of the reconnaissance phase studies that were funded in FY 1984.

Included under General Investigations is a request of \$20 million to continue planning and engineering on 36 projects, including three new starts. The Advance Engineering and Design (AE&D) program continues to decline as design is completed on the few remaining unconstructed authorized projects of interest to local sponsors. Work on 15 ongoing and two new starts are being funded with the \$7 million requested for the AE&D program.

Revolving Fund

No appropriations are being sought for the Revolving Fund in FY 1985. However, a number of major acquisitions are planned using available funds from the Revolving account. This includes contracts for several acquisitions and plant design in support of the dredging program. Among the 14 new major plant acquisitions being programmed are a replacement dustpan dredge and the conversion of another one from steam to diesel, both for use on the Mississippi River; a replacement sidecaster dredge for use in the shallow inlets along the East Coast; and three survey boats to monitor contract dredging along the Gulf and East Coasts. It is essential that conversion and replacement be initiated now to avoid any delay in meeting dredging requirements on these very important segments of the Nation's coastal and inland waterways. Our situation is similar with regard to the Corps of Engineers Automation Plan, commonly called CEAP, which identifies our automation requirements nationwide. We anticipate completing acquisition plans in FY 1985 and initiating procurement in FY 1986.

DREDGING

Corps Fleet

In previous years, I have reported that the Corps is working to reach a dredge fleet level that is consistent with P.L. 95-269. At this time, our dredge fleet consists of four hopper dredges and nine non-hoppers. The four Corps hopper dredges have been assigned to the three seacoasts where mobilization dredging requirements are most likely to occur and where the bulk of our maintenance dredging requiring hopper dredges occurs. Starting this fiscal year, Corps dredges will no longer be operated on the Great Lakes; but, to date, we have received good bids from the dredging industry there. Our non-hopper dredge fleet currently includes three dustpan dredges which are employed primarily on the Mississippi River, but can respond to dustpan dredging requirements on the lower sections of the Missouri and Ohio Rivers as well. In addition, we have two cutterhead pipeline dredges on the upper Mississippi River, which will also serve on the Illinois Waterway, and three sidecaster dredges and one special-purpose dredge to maintain the shallow-draft navigation projects on the East Coast, primarily in the Southeast.

As Corps dredges are retired and as they continue to be retired, we have come to rely predominantly on the private sector to perform our dredging. However, consistent with P.L. 95-269, our minimum dredge fleet should be technologically modern and our budget reflects measures being taken towards achieving this objective. In FY 1984 we estimate that over 80 percent of our total maintenance dredging and 100 percent of our new work or construction dredging will be done by contract. Maintenance dredging programmed for FY 1984 totals in excess of 280 million yards while new construction dredging should approximate 50 million yards.

In summary, as private industry has developed the capability to respond to our dredging requirements, we have reduced the Corps dredging fleet. Since the enactment of P.L. 95-269 in early 1978, we have retired 14 hopper dredges and currently have four modern hopper dredges. We have also retired 10 non-hopper dredges and currently operate nine. Modernization of the non-hopper fleet will start in FY 1985.

Corps of Engineers Reserve Fleet (CERF)

Concurrent with the reduction in the Corps fleet we have moved to augment our present dredging capability so that we can meet emergency and national defense needs. To this end, we are well underway toward establishing a reserve fleet of industry hopper dredges. This program is similar to the Civil Reserve Air Fleet of the Air Force and the Sealift Augmentation Program of the Navy with the exception that the Corps will not compensate private contractors unless a dredge is activated.

On 2 December 1982, at a national meeting with private dredging contractors, the concept of a CERF was agreed upon by the contractors and the Corps of Engineers. We have used Basic Ordering Agreements (BOA) for implementing the reserve fleet concept and have prepared, negotiated, and signed seven such documents. Agreements for the use of seven dredges were executed with: the North American Trailing and Dredging Company (4); the T.L. James Company (2); and the C.F. Bean Company (1). There are five other operational hopper dredges in private industry and proposals to be included in the CERF have been received for all five. Cost-and-pricing data as well as negotiations are expected to be completed for the five dredges soon. Once the hopper dredge reserve fleet program is in place and the reserve fleet capability demonstrated, we will move toward establishing a similar program for the non-hopper fleet.

Disposal of Dredged Material

Finally, there have been some changes in the approach for designating ocean sites for the disposal of dredged material. We consider the disposal of dredged material into ocean water as an equal alternative to other options. A growing body of evidence compiled over the last 10-15 years indicates that the ocean should not be precluded as an option for the disposal of dredged material. The international community appears to be thinking along these same lines. Much of the concern over dredged material came from the fact that in certain limited situations there were contaminants associated with dredged material, but our scientists have indicated that over 90 percent of the sediments we annually dredge from navigation projects are clean and pose no significant chemical and/or toxic threat to the environment. However,

transporting this material extended distances out in the ocean would significantly increase the cost of present maintenance dredging. The extension also may well affect future decisions on possible improvements to existing harbors and channels. Recently, an ocean site was designated for a three-year use period by EPA for the disposal of construction dredged material from the Tampa Bay, Florida project. We propose to monitor the effects of disposal at that site using criteria jointly developed with EPA. If there are no significant adverse environmental effects, it would be inappropriate to move farther out to sea for disposal of dredged material from subsequent maintenance activities. Two recent studies support our concerns. Currently, some 135 designated ocean disposal sites are required for the maintenance of some 115 harbors, channels and coastal waterways. There are, however, efforts underway to have us move our disposal sites farther out in the ocean. The impact from such a move was recently quantified for two separate project areas -- New York Harbor and Tampa Bay. Moving some 94 miles farther out, as proposed by others, would add about \$85 million to the annual dredging cost of \$27 million for the New York Harbor area. At Tampa Bay, an increase of 12 miles would require an additional \$40 million to complete the project's deepening and maintain it for 50 years.

RESPONSES TO NATURAL DISASTERS

With funding for Flood Control and Coastal Emergencies under P.L. 84-99, the Corps accomplishes emergency operations as well as advance planning and preparedness activities which insure a rapid response to natural and manmade disasters. The budget request for FY 1985 is \$10,000,000, which is equal to the FY 1984 appropriation. This funding would support the preparedness activities as well as meet emergency operations requirements for a minimum response year.

Potential Flooding

Two areas of the United States presently indicate a high potential for flood problems this spring and summer. These are the Great Salt Lake and Utah Lake in Utah. Record amounts of precipitation were recorded in Utah in November and December. The Great Salt Lake is 4.5 feet higher than a year ago

at this time and is at the highest level the lake has been since 1887. Moreover, Great Salt Lake is forecast to rise another 2 to 3 feet by late spring or early summer. Similarly Utah Lake is 1.5 feet higher than one year ago, with a January 1st reading of 3.4 feet above "compromise" level. The National Weather Service is forecasting Utah Lake to rise to a peak of between 5 and 6 feet above compromise level this spring. However, if Utah were to experience another spring like last year, these forecasts could increase another 1 to 2 feet. At the request of the Governor of Utah, we have instigated emergency measures that could help meet this possible threat. Last year we constructed emergency levees to protect the Provo Utah airport and a residential subdivision. As a result of the recent increase in Utah Lake water level, we initiated work to raise those emergency levees. In addition, a project to increase the carrying capacity of the Jordan River between Utah Lake and Great Salt Lake was found to be feasible, and our Sacramento District was authorized to initiate work on the channel improvement under P.L. 84-99. However, the State and potential local sponsors were unable to provide the necessary assurances of local cooperation and work on the channel project has been deferred. The inability to increase the channel capacity may add to the potential flood hazards during the snowmelt and cause a recurrence of the flood conditions experienced last year -- especially in Salt Lake City.

Recent rainfall also has raised the spectre of future flooding in two other areas. The Pacific Northwest has experienced some ice problems along with recent periods of above-normal rainfall. In the Central Valley of California, above- to well-above-normal precipitation amounts in the last two months will produce above-normal runoff conditions. Tulare Lake in California is on the rise again.

Again this year, as in 1983, significant amounts of snow have fallen in many areas of the west. Consequently, monitoring of the snowpack is being coordinated on a continuous basis with the Bureau of Reclamation and the National Weather Service in the upper basin of the Colorado River where the snow cover ranges from 150 to 200 percent of normal, in Utah in the drainage basins of the Great Salt Lake and Utah Lake, and in the Sierra Nevada Mountains of the Sacramento and San Joaquin basins. Some headwater areas of the upper Mississippi River basin, as well as the Great Lakes area, also have

heavy snow amounts on the ground, but it is too early to determine the relative impacts. Fortunately, snow cover elsewhere in the Nation is light.

NATIONAL EMERGENCY PREPAREDNESS PROGRAM

Mobilization responsiveness is one of the Corps major capabilities. The Administration's Emergency Mobilization Preparedness Policy is to develop a capability that will insure that government at all levels, in partnership with the private sector, can respond decisively and effectively to meet essential civilian and defense emergencies. The Federal Emergency Management Agency (FEMA), Department of Defense, and Department of the Army have assigned the Corps essential domestic and national security emergency functions and established preparedness program requirements. Our long range program and FY 1985 program and budget request are responsive to these assignments.

The FY 1985 request for Mobilization Planning is \$9.9 million and represents an increase from previous years. Previous funds were used to identify mobilization support requirements. The proposed budget reinforces these ongoing programs and provides startup funds for new initiatives based upon identified requirements. New initiatives include implementing the newly assigned Water Preparedness mission to develop overall plans and procedures for the management, allocation, and use of water and water resources in emergency situations, and to develop a framework for the coordination of emergency water resource planning at the regional, State, and local levels.

Since time has become the most critical factor in any mobilization effort, the Corps Civil Works personnel represent a well-trained, knowledgeable, reserve of technical and professional manpower capable of rapidly transferring its expertise to military construction. This Civil Works cadre provides a partial but critical cushion against the construction surge that a mobilization would bring. In his report to the Congress on the FY 1984 budget, Secretary of Defense Weinberger made it clear that he takes very seriously the inclusion of civilian assets in the mobilization equation. He stressed that "the deterrent value of mobilization resides not only in the military components but also in the convertibility of civilian manpower and production capabilities into military units and industrial warfighting

support." The Civil Works strength of the Corps of Engineers clearly is a valuable element among those resources the Secretary identified.

MANPOWER

The Corps manpower ceiling for its FY 1985 Civil Works Program is 28,896 Full Time Equivalent (FTE) workyears or only 39 workyears less than the FY 1984 ceiling. The proposed reduction will come from the closing of 11 printing facilities and cutting back on personnel and equipment at an additional 12 locations. Right now we are concentrating on complying with the significant reduction of 1,629 FTEs by the end of FY 1984 and are accomplishing the reduction by the following means: (1) consolidation of certain in-house support functions that could be centralized; (2) establishment of centers of technical expertise; (3) transfer of workload to the private sector through the contracting of non-critical commercial activities; (4) shut down of Corps dredges; and (5) judicious use of temporary and part-time employees. Despite these efforts, some reductions in force may be required.

FEDERAL ENGINEER

Our expanding role as the Federal Engineer reflects the value of a nationwide organization with proven capability and performance abilities. For years the Corps has responded to requests for technical assistance, including construction management, from other Federal agencies, State and local entities, and foreign governments. In fact, standing agreements to provide specific areas of assistance are in effect with numerous Federal agencies and additional agreements are being negotiated. The Corps part in the National Superfund Program exemplifies the Corps "Federal Engineer" role. The Corps is currently engaged in a design and construction mission for cleanup of hazardous waste sites with EPA under interagency agreement.

CONCLUSION

In summary, the budget request for FY 1985 maintains a positive balance between our commitments for ongoing work and new starts. I believe there is optimism that agreement can be reached between the Administration and the Congress on the cost-sharing and financing of new construction starts -- enabling us to resume working with the States and local sponsors in developing those projects that are so vital to their needs. The important thing is that we have cost-sharing consistency for the same project purpose among all water resource agencies. I also am encouraged by the prospect that the Corps, which I consider to be an important national asset, will continue to play a meaningful role in the expansion of our Nation's water resources and its economic infrastructure. The concerns being expressed for the rehabilitation of the country's transportation and water supply systems coincide with our concern for the rehabilitation of Corps structures and the revitalization of the waterways and ports. Certainly the Corps has the engineering and construction expertise and organizational capability that can and should be effectively utilized in a program of prudent, selective investment in the Nation's economic base in the decades immediately ahead.

This concludes my statement.

CORPS OF ENGINEERS - CIVIL WORKS PROGRAM

SUMMARY OF PROGRAM AMOUNTS FOR FISCAL YEARS 1983, 1984, AND 1985
(\$Million)

Account Title	FY 1983 (Appropriations)	FY 1984 <u>3/</u> (Appropriations)	FY 1985 Budget Request
General Investigations	139.042	135.810	118.0
Construction, General	1,508.405 <u>2/</u>	889.304	874.0
Operation & Maintenance, General (Special Recreation Use Fees <u>1/</u>)	1,206.309 (4,942)	1,190.492 (6,000)	1,297.0 (15.0)
Flood Control, Mississippi River & Tributaries	403.052	300.480	304.0
General Expenses	100.100	105.800	113.0
Flood Control & Coastal Emergencies	54.877	10.000	10.0
Revolving Fund	-	9.500	-
Subtotal	3,411.785	2,641.368	2,716.0
Permanent Appropriations	9.542	7.700	8.0
TOTAL	3,421.327	2,649.086	2,724.0

1/ Included in Operation and Maintenance, General.2/ FY 1983 includes \$180M deferred for use in FY 1984-1985.3/ Reflects proposed transfer of funds from Construction, General (\$4.8M) to General Investigations (\$2.0M) and General Expenses (\$2.8M).

1 February 1984

DETAILED SUMMARY OF CIVIL WORKS PROGRAM
FISCAL YEAR 1985 BUDGET

TOTAL FISCAL YEAR 1985 CIVIL WORKS BUDGET

The President has requested a gross program of \$2,724 million for the Fiscal Year (FY) 1985 Army Civil Works program. This is an increase of \$75 million over the FY 1984 appropriation of \$2,649 million. When offsetting receipts of some \$233 million are considered, the net FY 1985 budget request totals \$2,491 million.

ACTIVITIES UNDER THE GENERAL INVESTIGATIONS APPROPRIATION

Overall Request

The General Investigations budget request for FY 1985 is \$118,000,000, an increase of about \$7,600,000 over the FY 1984 budget request of \$110,400,000.

Surveys and Planning

Navigation, Flood Damage Prevention, Shoreline Protection, Comprehensive and Special Studies. The budget request for these studies is \$43,194,000, a decrease of \$14,111,000 from the FY 1984 allocation of \$57,305,000. This request would fund 129 studies, including 14 study completions. The budget request for surveys includes \$2,900,000 as the Federal share of the first year's work on 21 feasibility phase studies. These feasibility phase studies are follow-ons to some of the reconnaissance phase studies that were funded in FY 1984.

Review of Authorized Projects. The FY 1985 budget request is \$6,265,000, an increase of \$5,125,000 from the FY 1984 allocation. Included in the total is \$330,000 to continue one and complete one restudy of deferred projects, \$5,755,000 to review nine completed projects, and \$180,000 to complete the

review of 39 projects for possible deauthorization. The increase is primarily due to the \$4,000,000 requested to continue the investigations toward developing a permanent solution to the problems caused by Mount St. Helens on the Cowlitz River and its tributaries in Washington.

Coordination Studies With Other Agencies. Our budget request of \$5,585,000 is an increase of \$295,000 from the FY 1984 allocation. Included in this category is \$2,535,000 for the programs of Special Investigations and FERC Licensing. Another major part of this request, \$2,550,000, is for Planning Assistance to States with which we will provide assistance to all 50 States, the Pacific Islands, and Puerto Rico. Our assistance will allow the States to become more effective partners in resolving water problems.

Legislative Phase I Stage of Advance Engineering and Design. Legislative Phase I projects are not authorized for construction, and require additional formulation studies of potential projects. As a part of the Phase I study process, alternative solutions recommended by the survey report plan are carefully reevaluated, and changes may be recommended. The FY 1985 budget request includes \$3,839,000 to complete one study and continue work on five others. This is a decrease of \$116,000 from the FY 1984 allocation of \$3,955,000.

Advance Engineering and Design. The FY 1985 budget request for Advance Engineering and Design (AE&D) is \$7,052,000, a decrease of \$6,373,000 from the FY 1984 allocation of \$13,425,000. This request would continue AE&D on 15 projects authorized for construction, of which four will be completed. In addition, AE&D will be initiated on two projects.

Continuation of Planning and Engineering Studies. The FY 1985 budget request for Continuation of Planning and Engineering Studies is \$20,210,000, an increase of \$3,700,000 over the FY 1984 request of \$16,510,000. This request would fund 36 studies including seven for completion and three new study starts.

Collection and Study of Basic Data

The FY 1985 budget request of \$10,855,000 is \$1,155,000 greater than the \$9,700,000 allocation for FY 1984. The activities which have the largest dollar amounts in this category are Flood Plain Management Services, \$7,300,000, and Coastal Field Data Collection, \$1,600,000. Other activities, which total \$1,955,000, include Precipitation, Hydrologic, Transportation, Environmental Data, and International Waters Studies; Stream Gaging; and Scientific and Technical Information Centers.

Research and Development

The budget request for Research and Development under the General Investigations appropriation is \$21,000,000, which is an increase of \$250,000 over the FY 1984 allocation of \$20,750,000. The FY 1985 request will permit progress in all research areas. Funds totaling \$13,025,000, an increase of \$5,530,000 over the FY 1984 allocation of \$7,495,000, are included under other appropriations for Research and Development work closely related to other activities.

ACTIVITIES UNDER THE CONSTRUCTION, GENERAL APPROPRIATION

Overall Request

The FY 1985 budget request for Construction, General is \$874,000,000, a decrease of \$20,104,000 from the adjusted FY 1984 appropriation of \$894,104,000. The request contains \$2,600,000 for two new start construction projects. These projects are Cowanesque Lake, PA and Pajero River, CA. Funding of the new construction starts reflects the cost-sharing and financing proposals worked out between the local sponsors and the Department of the Army. The budget request also includes \$32,160,000 for the second year requirement for the twelve FY 1983 and FY 1984 new start construction projects that are pending FY 1984 Congressional action.

Continuing Construction Projects

The FY 1985 budget request includes \$731,199,000 to maintain schedules, insofar as possible, for 106 continuing construction projects, one reimbursement project, 11 ongoing major rehabilitation projects, one dam safety assurance and five engineering and design projects. This is a decrease of \$47,171,000 from the FY 1984 allocation of \$778,370,000. The request will permit the completion of 16 projects.

Major Rehabilitation

The Major Rehabilitation program covers significant one-time structural repairs on completed projects that cost in excess of \$5,000,000 for an individual project. The FY 1985 budget request includes \$53,030,000, a decrease of \$2,579,000 from the FY 1984 allocation of \$55,609,000, for 11 projects in this program. Five of the continuing projects will be completed with the funds requested. This remedial work will restore structures to an adequate operating condition, substantially increase their physical life, and permit continued effective realization of their benefits. Effective in FY 1985, new start major rehabilitation projects are budgeted under the Operation and Maintenance, General appropriation.

Dam Safety Assurance

The Dam Safety Assurance program provides for modification of completed Corps dam projects which are potential safety hazards in light of present-day engineering standards and knowledge. The FY 1985 budget request includes \$900,000, a decrease of \$2,300,000 from the FY 1984 allocation of \$3,200,000, to continue construction on one project in this program. The program will facilitate upgrading of those project features which, due to updated or changed climatic or hydrologic conditions or projections, no longer function as originally intended.

Special Continuing Authorities

The FY 1985 budget request for the six Continuing Authorities that make up the Small Projects Program funded under Construction, General is \$36,725,000, an increase of almost \$12,000,000 over FY 1984. Funding for construction new starts accounts for about one-third of the budget request and is mostly for responding to flood control and emergency streambank problems. The request will permit initiation and continuation of planning and continuation of construction in these programs that address relatively small navigation, flood damage prevention, beach erosion control, emergency streambank and shoreline protection, and snagging and clearing problems. Planning and design on projects for mitigation of shore damages attributable to navigation projects will also be continued. In addition, the program of planning and construction for the emergency streambank protection program will continue under traditional cost-sharing arrangements. This request also includes funding for continuing previously funded planning and design work.

Aquatic Plant Control

The budget request includes \$7,000,000 for Aquatic Plant Control, which is an increase of \$2,000,000 over the FY 1984 allocation of \$5,000,000. Noxious aquatic plants presently infest about 1 1/2 million acres of streams and lakes, and have the potential to infest about 53 million acres nationwide. The budget request for the Aquatic Plant Control program includes \$1,500,000 for research and development and \$340,000 for planning, which are 100 percent Federally funded; and \$4,860,000 for control operations, which are cost-shared 70 percent Federal and 30 percent non-Federal. The major objective is to establish effective Federal-State action to control noxious aquatic plant infestations which have significant economic or environmental impact on use of the Nation's waterways. The FY 1983 Supplemental Appropriation Act (P.L. 98-57) authorized an increase in the annual funding limit from the previous \$5,000,000 to \$10,000,000 due to the continued spread of the aquatic plant problem outside of the Southeastern United States.

Employees' Compensation

The FY 1985 budget request includes \$10,386,000 for costs previously paid by the Department of Labor from the Employees' Compensation Fund during the period 1 July 1982 through 30 June 1983 as the result of injury or death of employees under the jurisdiction of the Corps of Engineers civil functions. This is an increase of \$986,000 over the FY 1984 allocation of \$9,400,000.

ACTIVITIES UNDER THE OPERATION AND MAINTENANCE, GENERAL APPROPRIATION

Overall Request

The Operation and Maintenance, General request for FY 1985 is \$1,297,000,000, an increase of \$106,508,000 over the FY 1984 appropriation of \$1,190,492,000. The FY 1985 program, however, includes an added \$40,200,000 for activities previously accomplished under other appropriations: new start major rehabilitation projects, commercial statistics, recreation facilities at completed Corps projects, and Special Recreation Use Fees. The Corps operates and maintains completed projects to insure that the significant public benefits of navigation, hydropower, flood control, water quality and supply, and recreation are provided, consistent with authorized project purposes and current project demands. In FY 1985, the Corps will operate and maintain 293 navigation projects, 270 flood control reservoir projects, 20 local protection projects, and 71 multiple-purpose projects with power.

Program Highlights

The FY 1985 budget request of \$257,000,000 for operation and maintenance of multiple-purpose power projects is an increase of \$18,000,000 over the FY 1984 allocation. One Dam Safety Assurance new start was added to the O&M program in the amount of \$1,600,000 for correction of a seismic problem at Abiquiu Dam in New Mexico. Structural repairs at other projects have been

given high priority. The FY 1985 budget request of \$722,000,000 provides sufficient funds for the operation and maintenance of navigation features of inland, deep-draft and shallow-draft projects. However, the competition for limited funds requires the deferral of some maintenance of lower priority projects.

Hydropower

As of 30 September 1983, the Corps was operating 68 projects producing hydropower. These projects have 336 generating units with an aggregate nameplate capacity of 19,364,777 kilowatts, which accounts for approximately one-fourth of the Nation's installed hydroelectric capacity. These projects also provide navigation, flood control, water quality and supply, and recreation benefits, consistent with authorized project purposes and current project demands. Last year, Corps hydropower energy production amounted to about 77 billion kilowatt-hours. The Corps' present hydropower capability constitutes approximately three percent of the Nation's electrical power generating capacity and three percent of the electrical energy produced.

Major Rehabilitation

Major Rehabilitation work which had been funded prior to FY 1985 is included in the Construction, General request. Projects to receive initial major rehabilitation construction funding in FY 1985 are now included in the Operation and Maintenance, General budget request. The FY 1985 budget request includes \$12,700,000 to start remedial work on one lock and dam project, three harbor projects, and one multiple-purpose power project, representing a total Federal investment cost of \$78,900,000.

Great Lakes Diked Disposal Program

The Great Lakes Diked Disposal program, originally authorized by Section 123 of the 1970 Rivers and Harbors Act, provides for the construction, operation and maintenance of contained dredged-material disposal facilities

in the Great Lakes area. Originally it was estimated that 51 diked projects would be required to contain polluted materials removed from the authorized navigation projects in the area. Detailed analysis of the materials involved resulted in EPA reducing the estimated volume of polluted materials to the point that only 47 diked projects are required. At present, 24 diked sites have been completed and are operational. In FY 1984, construction will be underway at two sites (Chicago area, Illinois; and Monroe Harbor, Michigan) at an estimated expenditure of \$44,000,000. Engineering and design will be accomplished on seven sites in FY 1984. The FY 1985 request is for \$11,900,000. It will provide the funds needed to initiate construction at four sites (Indiana, St. Joseph, and Green Bay Harbors, and on the Saginaw River), complete construction at the Chicago River main dike site and Monroe Harbor, and to accomplish engineering and design work on seven projects in Illinois, Indiana, Ohio, Michigan, and Wisconsin.

Recreation Management

Nearly 500 million recreation days were recorded at Corps projects during Calendar Year (CY) 1983, maintaining the Corps' role as a major provider of recreation opportunities to the public. The FY 1985 request includes \$111,196,000 for operation and maintenance of approximately 2,300 recreation areas. \$5,900,000 is included for increased law enforcement protection in Corps-operated areas during periods of peak visitation. Efficiency of operation reviews have been completed, resulting in total closure of 150 areas, partial closure of 212 and leasing of 49 to non-Federal entities by the end of CY 1983. For the first time in this appropriation, this figure includes \$15,000,000 of Special Recreation Use Fees monies returned to the Corps for operation and maintenance of recreation areas. This funding activity was covered in prior years under a separate appropriation title.

Recreation Facilities at Completed Projects

The budget request of \$10,000,000 for development of recreation facilities at completed projects is a decrease of \$3,500,000 from the FY 1984 allocation. Of this amount, \$5,750,000 is for construction of facilities on a 50-50 percent cost-sharing basis with local interests who also agree to operate and maintain the developed recreational areas. The remaining \$4,250,000 is to fund new construction starts in the continuing program for correction of sanitary deficiencies at completed projects presently in violation of state and Federal standards. Funds for this program are being requested under the O&M, General appropriation for the first time in FY 1985; in previous years, the program was included in the Construction, General request.

Natural Resources Management

The FY 1985 request includes \$27,211,000 for Natural Resources Management at over 450 lakes and navigation pools comprising over 11 million acres, about half of which is water surface, with about 50,000 miles of shoreline. This is an increase of \$1,200,000 (4.6%) over the FY 1984 allocation. Intensive public use requires careful management to maintain the natural resources base essential to meet all authorized project purposes. The FY 1985 request will meet mitigation requirements and basic protection of the resources base. This basic protection includes: preservation and maintenance of vegetation, soil, water, fish, wildlife, and other elements essential to the total ecological management of each project. Outlease and permit programs are integrated with resource management of fish hatcheries, ladders, elevators, locks, and related facilities for passage of anadromous fish and by specific project fish and wildlife studies.

Regulatory Functions

The FY 1985 budget request includes \$49,500,000 for the regulatory program, which is identical to the FY 1984 allocation. Regulatory activities are conducted primarily under the authorities of three Acts: Sections 9 and 10 of the River and Harbor Act of 1899; Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972; and Section 404 of the Clean Water Act. Figures for the last five years indicate that the number of applications received for individual permits has declined slightly to less than 15,000 in FY 1983, after substantial increases in the mid-70's. In FY 1977 we reached a high of 21,000 applications. Since that time, our use of regional and nationwide permits has kept this number down by exempting the public from making formal application to the Corps in many situations. In FY 1983, regional permits authorized over 10,000 activities around the country. As a result of a directive from the President's Task Force on Regulatory Relief, we are in the process of implementing significant program reforms which are already expediting processing of applications and reducing the regulatory burden on the public. We are now completing review on almost two-thirds of our applications within 60 days. We expect a reduced level of enforcement as we concentrate on reform implementation.

Mobilization Readiness Planning

The Corps National Emergency Preparedness Program (NEPP) is at a stage where significant dollar resources must be applied to maintain the momentum and progress in the program. Previous budgets were used to identify mobilization support requirements. The FY 1985 budget request of \$9,000,000, an increase of \$4,900,000 from the previous year, reinforces ongoing programs and provides start up funds for new initiatives based upon identified requirements. The funds will be used to continue to develop national emergency preparedness plans, to supply and maintain emergency facilities, and to train personnel to meet the responsibilities of a national emergency. The new initiatives are (1) implementation of the water preparedness mission assigned to the Corps under E.O. 11490, as amended

(\$900,000); (2) upgrading of existing substandard emergency operation centers (\$222,000); and (3) upgrading and converting existing facilities to emergency relocation sites to increase the survivability of the Corps command and control structure (\$3,000,000).

Environmental and Water Quality Operational Studies

Legislation reflecting the national concern for water quality and for the preservation and protection of the environment makes these issues major considerations in our water resources development and management programs. The FY 1985 budget request includes \$1,000,000 for the eighth year of a \$33,865,000 program aimed at developing improved design and operation procedures to meet national environmental and water quality objectives while serving authorized project purposes. This program was initiated in 1978 at the Waterways Experiment Station and includes field studies at various sites across the Nation. The program is being closely coordinated with the Environmental Protection Agency and other interested Federal agencies. The program is presently scheduled for completion in FY 1985.

River Ice Management (RIM)

As part of the Corps responsibility for the operation and maintenance of the Nation's waterways, it attempts to provide reliable avenues for waterborne commerce. Across the northern United States, ice presents a major physical impediment to winter navigation on domestic waterways, particularly in those areas accustomed to year-round navigation. The challenge is to develop ice control techniques which will permit cost-effective, reliable, and safe navigation throughout the year without adverse environmental effects. Therefore, the FY 1985 budget request includes \$3,000,000 for the third year of the seven-year, \$12,000,000 River Ice Management program to develop structural and operational solutions to ice problems in river systems.

Repair, Evaluation, Maintenance, & Rehabilitation Research Program (REMR)

Of the more than 600 Corps-operated-and-maintained hydraulic structures, more than half are over 20 years old, 42 percent are more than 30 years old, and 26 percent were constructed prior to 1940. Many of these structures will reach their 50-year design lives by the turn of the century. Experience has shown that repair and rehabilitation of older facilities requires various types of expertise, some of which are different from those required in connection with design and construction of new structures. Because of this, the Corps has included in its FY 1985 budget request \$7,325,000 for the second year of the six-year, \$35,000,000 REMR program, to study (a) repair requirements and materials for concrete and steel structures, (b) geotechnical concerns, (c) hydraulic structures of inland and estuarine channels, (d) coastal structures, harbor entrances and channels, and shore protection, (e) procedures for electrical and mechanical maintenance, and (f) environmental impacts of recommended techniques. Solutions to these problems will permit the Corps to respond more efficiently and economically to REMR responsibilities.

Catalog of Unmet Maintenance and Repair (CUMAR)

Increased effort is being directed to better defining and characterizing the make-up of the Corps unmet maintenance program. We are now in the process of cataloging all unaccomplished maintenance and repair -- identifying not only the economics and the scope of work involved but also the relative national priorities as determined by the functioning of a project and the severity of the problem. This procedure should facilitate our efforts to program and plan future maintenance requirements including major rehabilitation, and to develop a more responsive multi-year investment level.

ACTIVITIES UNDER THE FLOOD CONTROL AND COASTAL EMERGENCIES APPROPRIATION

Under Public Law 84-99, Flood Control and Coastal Emergencies, the Corps accomplishes advance planning and preparedness activities to insure rapid response to natural as well as manmade disasters. The budget request is

\$10,000,000, which is equal to the FY 1984 appropriation. This funding would support the preparedness activities as well as meet emergency operations requirements for a minimum response year.

ACTIVITIES UNDER THE REVOLVING FUND APPROPRIATION

Estimated capital improvement program expenditures in FY 1985 are \$78,000,000. There is no new budget authority request in the FY 1985 Program. Expenditures for the Plant Replacement and Improvement Program result from using funds generated by Revolving Fund rental charges for use of Government-owned plant and equipment. Included in the \$78,000,000 are: \$28,310,000 for major new items, including \$800,000 for design of a replacement dustpan dredge; \$5,000,000 to complete design and initiate the conversion of the dustpan dredge JADWIN from steam to diesel; \$2,400,000 for the construction of 3 survey boats; \$1,600,000 for renovation of the Alaska District office building; \$200,000 for design work on the Corps of Engineers Automation Plan (CEAP); \$1,250,000 for construction of a replacement towboat; \$8,260,000 for Corps-wide radio communications; \$400,000 for a replacement service barge; \$3,700,000 for additional Computer Aided Design and Drafting Equipment (CADD); \$2,600,000 for initiation of a replacement Sidecaster Dredge; \$700,000 for a debris collector; and \$1,400,000 for warehouse replacement. The remaining \$49,690,000 includes expenditures for design, rehabilitation, construction, acquisition, and additions and betterments of miscellaneous items, such as structures, floating plant, mobile and fixed land plant, small tools, and office furniture and equipment.

Status of Hopper Dredge Construction by Corps

Public Law 95-269, enacted in April 1978, provided for a Corps of Engineers technically modern dredge fleet to meet national defense and emergency requirements both in the United States and abroad. Congress authorized the design and construction of three new Corps hopper dredges, one small, one medium, and one large class. All three dredges are now complete and operational.

ACTIVITIES UNDER THE FLOOD CONTROL, MISSISSIPPI RIVER
AND TRIBUTARIES, ARKANSAS, ILLINOIS, KENTUCKY, LOUISIANA,
MISSISSIPPI, MISSOURI AND TENNESSEE (FC, MR&T) APPROPRIATION

Overall Request

The FY 1985 budget request for FC, MR&T is \$304,000,000, an increase of \$3,520,000 from the FY 1984 allocation of \$300,480,000. Table 1 shows the breakdown by category and class for the number of projects and studies and dollar amounts for FY 1984 and 1985.

Major Highlights

The Old River Control Structure is continuing on schedule toward completion in FY 1986. In FY 1984, \$13,500,000 was allocated for further mitigation land acquisition for the Tensas River National Wildlife Refuge in Louisiana. During the first quarter of FY 1984, 2.7 miles of main stem levee improvements were accomplished, and an additional 7.1 miles of levee improvements are scheduled for completion in the remaining three quarters. The channel improvement program is continuing at a normal pace. The FY 1985 budget request includes \$100,000 to initiate remedial measures at Sardis Dam in Mississippi under the Dam Safety Assurance Program. No other new starts are included in the MR&T budget request for FY 1985.

TABLE 1
FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES

Feature	Fiscal Year 1984			Fiscal Year 1985			Increase or Decrease (\$ 000)
	Number of Projects or Studies			Number of Projects or Studies			
	New	Cont	Compl	New	Cont	Compl	
General Investigations							
							3,815
							-3,140
Surveys, Including Phase I							
Stage of AE&D	1	8	1/2		7	1	
Collection of Basic Data	NA	1	NA	NA	1	NA	(-2,640)
Continuation of Planning and							(0)
Engineering Studies	-	-	-	-	-	-	(0)
Advance Engineering and Design	-	2	1	-	2	1	(-500)
Construction	-	12	-	-	10	-	-17,615
Major Rehabilitation and Dam	-	-	-	1	-	-	+100
Safety Assurance							
Maintenance	-	28	-	-	28	-	+4,834
Savings and Slippage							
							-14,864
TOTALS							304,000
							+3,520

1/ Includes one study at \$475 which is pending congressional approval of funds transfer.

ACTIVITIES UNDER THE GENERAL EXPENSES APPROPRIATION

The budget request for FY 1985 for General Expenses is \$113,000,000, an increase of \$7,200,000 over the FY 1984 allocation. This appropriation, which is essentially for the Executive Direction and Management of the overall Civil Works Program, includes requirements for headquarters, division offices, and two support centers. The FY 1985 request, based on January 1984 salary costs, includes increases for salaries and benefits, and price level increases on non-salary items, travel and transportation, rent, communications and utilities, contract services, supplies and materials. Effective in FY 1985, the Commercial Statistics program is funded under the Operation and Maintenance, General appropriation.

PERMANENT APPROPRIATIONS

The FY 1985 request for Permanent Appropriations is \$8,000,000, an increase of \$300,000 over the FY 1984 allocation, and is the amount estimated to be available in the Governmental receipt accounts established by law as permanent appropriations to the Corps.

LEVISA AND TUG FORKS OF BIG SANDY AND CUMBERLAND RIVERS,
W. VA. AND KY.

Chairman HATFIELD. Thank you, General. Before I go into some questions of a regional nature, including Mount St. Helens, Bonneville lock, and the mouth of the Columbia River, I would like to defer to the distinguished minority leader of the Senate for some questions.

Senator BYRD. Mr. Chairman, I certainly thank you. That was done purely on a voluntary basis, not at my request, but it is characteristic of your thoughtfulness and courtesy, and I do appreciate it. I will be as brief as I can possibly be.

Mr. Gianelli, I have a few questions about some projects in West Virginia.

Mr. GIANELLI. Yes, sir.

SECTION 202 PROJECTS

Senator BYRD. No. 1, with reference to Tug Fork, does the \$10 million in the fiscal year 1985 budget for section 202 projects continue the construction of floodwalls in Williamson and West Williamson on the schedule outlined in the general plans for section 202 program implementation?

Mr. GIANELLI. Yes. I might, if you care, Senator, briefly bring you up to date on the status of the entire project covered under section 202.

We have scheduled work at Williamson, Pineville, and Barbourville, and that is proceeding. The construction of the West Williamson pump station is continuing and is scheduled to be completed in fiscal year 1985. A contract for relocation of the Pine Street Bridge in Pineville and the construction of its floodwall component was awarded in October 1983. We worked that out, as you may recall, Senator, with local interests in connection with the construction of a local highway. I am very pleased with the way that came out.

Senator BYRD. Is that Pineville, W. Va.?

General WALL. It is Kentucky.

Mr. GIANELLI. That was Pineville, Ky.; I'm sorry. The startoff on Pineville is scheduled to begin in fiscal year 1984, and the preconstruction planning for the South Williamson project will be completed as scheduled; and as you indicated, Senator, we have some \$10 million in the 1985 budget to carry out all of that work.

Senator BYRD. I thank you, Mr. Secretary, for your elaboration on my question. I guess the one-word answer would be "Yes." Is that right?

Mr. GIANELLI. I think we are proceeding on that project in accordance with the instructions we received from the Congress, yes.

OTHER DETAILED STUDIES

Senator BYRD. You may have anticipated my next question, but let me ask it for the record so it is specific. The general plan scheduled studies for Matewan, Welsh, and various tributaries to the Tug Fork of the Big Sandy River. Will these studies proceed on the pace outlined in the plan?

Mr. GIANELLI. I think, Senator—can we get the response for that and give it to you in writing?

Senator BYRD. Yes.

Mr. GIANELLI. I think we are prepared to give you a status to date on that. Thank you.

Senator BYRD. Yes.

[The information follows:]

SCHEDULE OF OTHER STUDIES—TUG FORK BASIN

Advance planning is continuing on schedule for other locations in the Tug Fork authorized planning area to determine the extent of flood problems and to formulate acceptable solutions to these problems. The current schedule for detailed project planning in the Tug Fork basin follows:

<i>Location</i>	<i>Completion date</i>
Matewan, W. Va.....	September 1984
South Williamson, Ky.....	December 1984
Tug Fork tributaries, West Virginia and Kentucky.....	March 1987
Kermit, W. Va.....	September 1987
Lovely, Ky.....	September 1988
Big Bend, Ky.....	September 1989
Upper Tug Fork, W. Va. and Ky.....	June 1991

Flood problems and solutions for Welsh, W. Va., will be investigated during the Upper Tug Fork study.

WORK IN SOUTH WILLIAMSON

Senator BYRD. Congress earmarked \$3.6 million for section 202 projects in fiscal year 1984, of which \$3 million was an amendment for work in South Williamson, Ky. The Corps has assigned to savings and slippage a net amount of \$2.9 million from the project allocation. Will any activities scheduled for West Virginia be affected by this \$2.9 million?

Mr. GIANELLI. As I indicated, we are going ahead with the preconstruction planning for the South Williamson project. But let me ask Mr. Steinberg, perhaps, to help me with the rest of the answer.

Mr. STEINBERG. Senator Byrd, based on the carryover of prior-year funds, all of the work is proceeding on the schedule that the Secretary mentioned to you a moment ago. The fact that savings and slippage was taken will not affect the schedules.

Senator BYRD. In West Virginia?

Mr. STEINBERG. In West Virginia.

GALLIPOLIS LOCKS AND DAM

Senator BYRD. Thank you. Moving to the Ohio River, I see that no funds were appropriated for the Gallipolis locks and dam project in the Fiscal Year 1984 Energy and Water Appropriation Act; and none are being requested for this purpose in the present fiscal year 1985 budget. Consequently, Gallipolis continues to be a dangerous and expensive bottleneck for commerce on the Ohio River. Does the omission of funding for Gallipolis in the fiscal 1985 budget suggest that the project will not be proceeding to construction in the near future?

Mr. STEINBERG. Senator Byrd, we made funds available from the supplemental which provided additional general investigations funds, and the district has adequate funds during the current year to continue engineering and design of this project.

Senator BYRD. When will the Corps complete its preconstruction work on Gallipolis?

Mr. STEINBERG. A date for completion of all preconstruction planning has not been set.

NEED FOR PROJECT AUTHORIZATION

Senator BYRD. I thought you would be able to complete this preconstruction work as early as March or April.

Mr. STEINBERG. Part of the problem is that since the project is not authorized, plans and specifications for the initial construction contracts

are not being worked on at the present time. This would require further action on the part of Congress, and it is that part of the preconstruction planning that would not really be complete by the close of the current fiscal year.

Senator BYRD. Well, I have asked the Environment and Public Works Committee to proceed with the authorization of Gallipolis. Will all progress on the Gallipolis locks and dam project cease? You say before or by the close of the fiscal year. Can you be more definite than that? That is a long time.

Mr. STEINBERG. I believe you are exactly correct, we will be completing all work except the plans and specifications. Since the project is not authorized, we did not direct the district to proceed with the plans and specifications. Other preconstruction planning work, that is completion of continuing preconstruction planning and engineering, will be completed earlier in the fiscal year, around April, as you indicated. Preparation of the plans and specifications for the first contract would require a year to complete.

Senator BYRD. So there would be a 6-month slippage even if Congress were to add funding to the fiscal year 1985 Energy and Water Development appropriation bill; is that correct?

Mr. STEINBERG. Yes, sir, and it could be longer, because without project authorization, funds for the plans and specs would be carried over into fiscal year 1986.

Senator BYRD. How much are the projected first-year benefits in current dollars for that project?

Mr. STEINBERG. We will have to provide that for the record.

Senator BYRD. All right. If you will, please, I understood it to be about \$100 million, but you are not prepared to verify that?

Mr. GIANELLI. We can supply that, Senator. We will verify that figure for you.

Senator BYRD. He was about to answer. If I may hear his response, Mr. Secretary?

Mr. STEINBERG. Just doing a quick calculation in my head, Senator, based on the couple hundred million dollar investment and a very high benefit-cost ratio of 10 or 11 to 1, that would seem to be about right.

Senator BYRD. You will proceed to take a closer look at that for the record, will you?

Mr. STEINBERG. Yes, sir, we will provide that for the record.

Senator BYRD. Thank you.

[The information follows:]

BENEFITS FROM THE GALLIPOLIS LOCKS AND DAM PROJECT

The last detailed economic evaluation indicated that if the project would become operational in 1990, through traffic would result in first-year benefits of \$98 million, expressed in October 1983 dollars. These benefits are based on a reduction in delays and transportation costs. Additionally, a severe navigation hazard on the Ohio River will be eliminated.

Senator BYRD. Given the reported benefit-to-cost ratio of 12 to 1 and the substantial losses which occur each year that we delay, Mr. Secre-

tary, would you support, or would you be in a position to support, some limited authorization and appropriation at this time so that the plans and specifications, land acquisition, and other activities prior to actual construction could proceed, thus reducing the period of delay?

Mr. GIANELLI. Yes, Senator Byrd. We are very hopeful for authorization. Gallipolis is one of the projects listed in both of the omnibus bills, and we are hopeful that the Congress and the administration will come to some understanding with respect to that entire subject and it will be authorized this year. Once it gets authorized, it certainly will have a very high priority because of its benefit-to-cost ratio.

LOCKS AND DAMS 7 AND 8, MONONGAHELA RIVER

Senator BYRD. Thank you. Just a question on locks and dams 7 and 8. Those two locks are nearly 60 years old and they are considered small and inefficient for commercial requirements.

Do you feel that consideration of the feasibility report on those two facilities could be expedited, and in view of the importance of those two projects, that they might be included in an authorization bill this year? Could you provide for the record information on the funding capability of these two locks and dams. First, the question as to whether or not consideration of the feasibility report can be expedited; and second, information on the funding capability for the record?

Mr. STEINBERG. Yes, sir, we can provide that for the record. But to the best of my knowledge, we have given the field offices adequate funds to process the reports, so funding is not a problem. I will check on the dams 7 and 8 study and see if the report has gotten to Washington. We will certainly look into the matter and answer your question for the record.

Senator BYRD. All right.

[The information follows:]

REPORT STATUS AND CAPABILITY—LOCKS AND DAMS 7 AND 8, MONONGAHELA RIVER

On January 6, 1984, the locks and dams 7 and 8 report was submitted to the Board of Engineers for Rivers and Harbors and a division engineer's public notice was issued. The fiscal year 1985 study capability is \$1.6 million to continue project planning and engineering. Although the study capability reflects the readiness of the work for accomplishment, it is in competition for available funds and manpower Army-wide. In this context, the fiscal year 1985 capability amount considers the study by itself without reference to the rest of the program. However, it is emphasized that the total amount proposed for the Army's civil works program in the President's budget for fiscal year 1985 is the appropriate amount consistent with the administration's assessment of national priorities for Federal investment. While we could utilize additional funds on this study, offsetting reductions would be required in order to maintain our overall budgetary objectives.

BIG SANDY AND KANAWHA RIVERS STUDIES

Senator BYRD. With reference to the Big Sandy River navigation study and the Kanawha navigation study, I understand that the budget includes only \$180,000 for the Big Sandy and \$100,000 for the Kanawha River navigation studies. These amounts would be down substan-

tially from prior-year funding levels, and much work remains to be done.

Can you indicate for the record your full fiscal year 1985 capability with respect to each of these studies?

Mr. STEINBERG. Yes, sir, we will provide those for the record. We have not—

Senator BYRD. Can you provide them now?

Mr. STEINBERG. No, sir, we don't have them now. We are reviewing those, and we would be happy to provide those for the record.

Senator BYRD. All right, please provide them for the record.

[The information follows:]

CAPABILITY FOR THE BIG SANDY AND KANAWHA STUDIES

Subject to the previously stated qualifications, the fiscal year 1985 capability for the Big Sandy River navigation study is \$350,000. The additional funds would advance the navigation interim study 1 year. The fiscal year 1985 capability for the Kanawha River navigation study is \$350,000. The additional funds would advance the final study report 6 months and the Marmet locks and dam interim study report 9 months.

GALLIPOLIS LOCKS AND DAM

Senator BYRD. I would like to return to our discussion on the authorization for Gallipolis and what remains to be done. Would you be in a position to proceed with plans and specs, land acquisition, and other activities prior to that full authorization if we were able in this committee to provide some limited authorization for that by way of funding?

Mr. STEINBERG. I spoke with the Division Engineer about that subject the day before yesterday, and he indicated he could. But as you indicated, we need congressional authorization to proceed.

Senator BYRD. For even that?

Mr. STEINBERG. Yes, sir.

Senator BYRD. For the plans, the specifications, and the land acquisition? What about plans and specs? Could that be done before the omnibus authorization bill?

Mr. GIANELLI. I think the plans and specs could be done, Senator, but I don't believe they are usually done until after the project is authorized. But they could be done.

Senator BYRD. You say it could be done, all right.

Mr. Chairman, I am about finished.

That would speed up the overall project.

Mr. GIANELLI. Any work you could do on any of these projects once you are certain that they will go ahead would, of course, speed it up, yes.

Senator BYRD. We will talk a little more about that.

Mr. GIANELLI. Yes, sir.

Chairman HATFIELD. Would the Senator yield on that point?

Senator BYRD. Yes.

STATUS OF NEW START LEGISLATION

Chairman HATFIELD. I would like to follow on with the issue raised by Senator Byrd.

As you know, Mr. Secretary, the authorization committee of the House has reported an omnibus bill that totals about \$16 billion; the Senate authorization committee has reported a bill that totals about \$8 billion. The House Appropriations subcommittee has reported a water resources new start bill of about \$5.2 billion. It has actually passed the House, is that correct, and this committee has reported that bill to the Senate—it totals about \$3.2 billion.

In each one of these four bills, the Gallipolis and Bonneville projects are included, as well as one other, the second lock at locks and dam 26. Both appropriations bills are subject to authorization—appropriations are made subject to authorization.

Mr. Gianelli, it might be helpful if you provide for the record a listing of inland waterway projects that are presently included in legislation being considered by both the Senate and the House for funding as new construction starts. Certainly, those projects that are listed in all four bills would merit the higher priority.

Mr. GIANELLI. Yes, Senator, we will provide that information for the record.

[The information follows:]

INLAND WATERWAY PROJECTS INCLUDED IN RECENT LEGISLATION ON
AUTHORIZATION OR NEW STARTS

Project	Authorization		Supplemental	
	H.R. 3678 House	S. 1739 Senate	H.R. 3958 House	H.R. 3958 Senate
Bonneville navigation lock, Oregon and Washington.....	X	X	X	X
Gallipolis locks and dam, Ohio and West Virginia.....	X	X	X	X
Lock and dam 26, Illinois and Missouri (second lock).....	X	X	X	X
Monongahela River, Grays Landing (lock 7), Pa....	X	X	X	—
Monongahela River, Point Marion (lock 8), Pa.....	X	X	X	—
William Bacon Oliver lock replacement, Alabama.....	X	—	X	—
Winfield lock and dam (Kanawha River), West Virginia.....	X	—	—	—

SUPPORT FOR INLAND WATERWAY PROJECTS

Chairman HATFIELD. So, as the administration is preparing the supplemental request for military pay and foreign aid, I am wondering if you would support the possibility of incorporating the Senate appropriations supplemental for new water projects, which is the lowest of all four bills? It includes Senator Byrd's project and one or two other very important projects. There are five or six facilities which have been identified as major bottlenecks in the water transportation system in this country—Corps studies have shown this.

In light of the fact that we have a \$69 billion trade deficit this year and an over \$100 billion trade deficit is projected for next year, and really, the only salvation that this country has experienced in that trade deficit has been mostly in agricultural exports. All of these waterways provide an energy-efficient system of moving goods.

In light of all these factors, do you think you, the administration, could support inclusion of the new start legislation that this committee has reported to the Senate, in a supplemental appropriations measure or the urgent supplemental item that the administration will be sending to the Congress?

Mr. GIANELLI. I can't respond specifically as to what the administration will overall do, but let me just say this, Senator: I think we are very encouraged by the action of the Congress with respect to the omnibus bills, and I know that you saw the statement put out by the President here a couple of weeks ago with respect to water development in general.

Having worked on that statement, I think the intention is to show additional flexibility on the part of the administration over that which was portrayed earlier. So we are hopeful, as a result of the matters now pending before the Congress, that there can be some agreement between the administration and the Congress on the authorization of some of these very needed projects. And then we can proceed with construction of some of the more urgently needed projects like those you mentioned. So I think the long and short of it is that we certainly are encouraged by what is happening, and once the Congress and the administration reach agreement, I think we could move forward very rapidly.

SUPPORT OF NEW STARTS APPROPRIATIONS BILL

Chairman HATFIELD. We could expect your assistance in reaching some kind of agreement, then, based upon this new flexibility that you have referred to?

Mr. GIANELLI. Yes, sir. In fact, I think it has been my goal, certainly, to get some of these projects off the drawing board, because quite a number of them are urgently needed; I think some of them have been referred to already this morning. It is my goal to get some of these good projects going. Unfortunately, we have been held up for some lack of agreement as to cost sharing and the like, but I see this year as the year; the Congress having addressed the issue, with the authorizing committee having made real progress, and the President indicating, as he did in his letter to various Members of Congress, additional flexibility on the part of the administration in dealing with this issue. So I very much want to be a part of this, and I very much want to see this worked out so we can move ahead.

Chairman HATFIELD. Would you support something short of full construction, as Senator Byrd has been pursuing on the Gallipolis project, for the other projects in the supplemental? Can you support that?

Mr. GIANELLI. I think your proposal, Senator, as I remember the supplemental, had about half the projects which we have been urging the

Congress to let us go ahead with, based on the cost-sharing arrangements that we worked out. So I think we can say, unequivocally, we have the support of the administration with respect to those half-dozen projects that are included in the supplemental. I think we will have to take a look at the others to see exactly what category they would fall in.

ADMINISTRATION SUPPORT

Chairman HATFIELD. I wanted to follow through on this point, because these three or four inland navigation projects we have mentioned are very important, critical in some cases. I think we must expedite them in every way possible, and not get into this catch-22 situation of authorization then appropriation debate and squabble between the administration and the Congress. I think we better start focusing in on the problem, the need, and I am going to suggest to the administration that they incorporate that in their supplemental request.

Senator BYRD. Well, I thank you, Mr. Chairman. I think you have hit the nail right on the head. Gallipolis is a bottleneck, and for years we have been proceeding with modernization of the navigational system up and down the Ohio River, and yet there is that remaining bottleneck which reduces the overall efficiency of the rest of the system which has been improved and which has been supported by this committee.

So, I fully support the Chairman in this regard and hope that we can get some supportive responses from the administration.

I do realize that the big authorization bill is held up in another committee, and as I say, I have pressed for the authorization of Gallipolis, but I certainly thank you, Mr. Chairman, for all the interest that you have shown over the years in matters not only affecting this particular area, but throughout the Nation.

I thank you, Mr. Chairman.

Chairman HATFIELD. Thank you, Senator Byrd.

Senator Johnston, do you have some questions?

OCEAN DISPOSAL OF DREDGED MATERIAL

Senator JOHNSTON. Yes. Thank you, Mr. Chairman.

First of all, gentlemen, I support you on your disposal of dredged material statement. I think it is very important that we not get hooked into carrying that material, particularly that which is nontoxic, 100 miles out to sea. If we get into that kind of situation, then we have raised the cost of maintaining and dredging our harbors many times over what it should be, and we will just make it virtually impossible to keep our harbors dredged, as difficult as it is right now.

So I very much support you on that.

Mr. GIANELLI. We appreciate that very much, Senator, and we have been having a number of problems in that area. We were forced to stop construction on the Tampa Harbor project; the Corps was forced to move the dredged material some 18 miles out into the ocean. If we have to go some 12 miles further without some demonstration that it is needed, that will bring up the cost over the life of the project by some

\$40 million. We think it should be determined that it is absolutely necessary before the Corps has to move out those distances for disposal of dredged material. We thank you for your help.

RED RIVER WATERWAY

Senator JOHNSTON. Thank you, Mr. Gianelli.

Mr. Gianelli, what is the schedule for completion of locks and dams 3, 4, and 5 on the Red River Waterway?

Mr. GIANELLI. I would like to ask General Bratton to respond to that, and then I will join in as appropriate, Senator.

General BRATTON. Our schedule right now, sir, for locks and dams 3, 4, and 5 is sequentially based with locks and dams 3, 4, and 5 showing a completion of plans and specs in 1987, 1991, and 1995, respectively.

The schedule is based on a single package for all the plans and specs for each of the locks and dams. It takes into account what we think is a realistic schedule for funding of the construction money, and it also takes into account what we think is a realistic schedule for negotiating for privately financed or non-Federal development of power at each of these three locks and dams.

Senator JOHNSTON. That is for completion of design?

General BRATTON. Completion of the plans and specs and designs, ready to award a construction contract.

Senator JOHNSTON. You don't begin design on lock and dam No. 4 until you complete No. 3?

General BRATTON. Essentially, that is correct. I can't say that we would do no work. We would do some, like preparation of a general design memorandum but basically, we would concentrate on lock and dam 3. When it is about finished, we would start into lock and dam 4. When it is about finished, we would start into lock and dam 5.

REASONS FOR DELAYS

Senator JOHNSTON. Has that order come down from OMB to do them sequentially?

General BRATTON. I am not familiar with anything from OMB that says that we have to stick to that schedule. I do know that OMB is aware of the schedule and has approved of it, but I don't believe it was directed. It was set by our design and spec capability consistent with the funds we expected to have.

Senator JOHNSTON. I would submit that doing it sequentially and on that basis looks to me like almost a deliberate delay of the project. I mean, I can't imagine doing it sequentially with all that money invested in lock and dam Nos. 3 and 4 and not even beginning No. 5 until 1995. I mean, I think that is a tremendous waste, and it is simply an unnecessary stretchout.

It seems to me that lock and dam No. 3 in 1987 is also a delay. I just cannot imagine delays of this kind. It looks to me like the administration has said, "Look, you delay that Red River as long as you can." Isn't that really what is going on here?

General BRATTON. Well, those instructions have never come to me, sir. What has come to me is the general policy that in these restrained budget times, with the large national deficit, that we should spread the cost over a period of time so that there is no great surge or peak with very large funding amounts which would result from construction. When that philosophy is being followed, it, of course, tends to spread the funding over time rather than peak it.

Senator JOHNSTON. The answer to my question was "Yes," wasn't it?

INTEGRATION OF HYDROPOWER

Mr. GIANELLI. Could I add a little to it, Senator? As you know, one of the things that we have been very interested in is to try to incorporate hydropower at dams 3, 4, and 5. The Corps has been negotiating with a number of the municipalities in your area with the hopes and, I think, expectation that they will join in this sort of joint venture, if you will, with the Corps in construction of the locks and dams.

From the standpoint of economics, it makes a lot of sense to try and design and construct both features of the dam at the same time if it is at all possible to do so. If you can award the contract, one contract, for example, to cover both the hydropower sections and the lock itself, I am sure it is much more efficient and much more cost effective than, for example, building a lock and then adding on hydropower at some later date. It could be done, but I don't think it is the most efficient.

So, as you may recall in the discussions that we had a year or two ago with you on this subject, it is our hope, and I think the Corps has been encouraged by some of the negotiations that have been taking place with local interests in connection with the construction of hydropower facilities. Certainly, it is our hope that that could happen.

IMPACT OF SEQUENTIAL SCHEDULE

Senator JOHNSTON. But Mr. Gianelli, this is a deliberate delay of this project. I mean, it is like starting a building by first designing the foundation, then when you finish your foundation construction you come back and say, well, now, let's design the superstructure, and you come back and you do that, and it takes 10 years to build your building, and all the while your interest charges are continuing to add up.

This is a deliberate delay, the 1987 schedule, to get the plans and specs for lock and dam No. 3 finished—that is a deliberate delay. This administration has been against the Red River Waterway from the start, and we finally got lock and dam No. 2 underway, and it was like pulling teeth to get that done. Now, it is the same thing with lock and dam Nos. 3, 4, and 5, with 1995 as the time to get the design of No. 5 finished and construction begun. That is outrageous. I just don't think the Corps ought to let itself be used like this.

Mr. GIANELLI. Senator, let me quickly add that I know of no deliberate attempt to delay this project as you have indicated on the part of the administration. I have tried to explain what we are trying to do. We have got over a billion dollar project here, as you know, and cer-

tainly, it would be great to build every billion dollar project all at once, but I don't think that has been very feasible. What we are trying to do is to work out a schedule that makes sense, and I don't know of any deliberate delay, any instructions that were given by the administration to deliberately slow down this project.

Senator JOHNSTON. You can say it is not a deliberate slow down—but not to have any peaks and valleys is to say, not to increase over an artificially reduced budget in the first place. In other words, if you are going to take the attitude that you are never going to increase funding, then that means you can't build but one lock and dam at a time; you can't put but one lock and dam under construction. You haven't done any other major water project like that in the history of the Corps. You didn't do Tenn-Tom like that—you didn't do the Arkansas River like that; didn't do any of them like that. This is the first one that has ever been done like that, isn't it?

Mr. GIANELLI. Of course, I haven't been here all that long, but my expectation is that Tenn-Tom has taken place over a long period of time. It was not all constructed simultaneously. That may not be a good example, but again, let me point out that one of the things that we are trying to do is to incorporate hydropower generation into the project, and I think it is in everybody's interest, including local interests, if we can do that. Hopefully, we can work out arrangements faster than indicated with respect to the local people helping develop hydropower; maybe we can expedite some of these things. I think that the output of hydropower can be an important part of the project.

IMPACT OF HYDROPOWER CONSIDERATIONS

Senator JOHNSTON. That doesn't have any effect on the Corps budget, hydropower.

Mr. GIANELLI. Well, yes, of course it does. For example, if the Corps is going to design and construct something and you know you are going to have hydropower in it, you will design the structure differently than if you are only going to have, for example, navigation alone. So it does have a bearing on the Corps budget and it does have a bearing on when the facilities would actually be constructed. I think hydropower is very much a part of what is going to happen with respect to the locks and dams 3, 4, and 5.

EXPEDITED SCHEDULE

Senator JOHNSTON. What is the soonest you could complete design and begin construction on lock and dam No. 3?

Mr. GIANELLI. Let me ask the Corps if they have any such estimate.

General BRATTON. Probably by the end of the next fiscal year we could make a start along that line, sir.

Senator JOHNSTON. About 18 months from now?

What would it take to get that done?

General BRATTON. What we would have to do is to obtain more funding than is presently scheduled for completing design and preparing the plans and specs. We would also have to make more progress than we

have been able to make so far in negotiating with the private sector on what they wanted to do about the development of hydropower at the three dams.

NEED FOR AN ESTABLISHED CONSTRUCTION SCHEDULE

Senator JOHNSTON. Well, you can't do hydropower unless you have a construction schedule. I mean, you have got to have a construction schedule before you can go and make your financial arrangements to determine whether you are going to do hydropower; isn't that right?

General BRATTON. That is normally the case, yes, sir.

Senator JOHNSTON. And we don't have a construction schedule.

General BRATTON. We do not have a construction schedule.

Senator JOHNSTON. So you are waiting for hydropower; hydropower must wait for you, but you are not doing what you have to do to get hydropower going. Now, if that is not delay, tell me why that is not delay.

General BRATTON. What we are trying to do is get an agreement on the hydropower which would enable us to set a construction schedule. We don't know how long it is going to take to get that agreement on the hydropower.

Senator JOHNSTON. You just said that you can't get an agreement on the hydropower until you have a construction schedule because that is a necessary part of the critical path between getting their financing arrangements, isn't it?

General BRATTON. Well, that is, of course, true. What I would hope would happen would be that we could make enough progress on the non-Federal hydropower that we could begin to pin it down sufficiently to establish a construction schedule.

Senator JOHNSTON. What do you mean "pin it down"?

General BRATTON. We wouldn't want to start construction for 1½ or 2 years, probably couldn't start construction for 1½ or 2 years until after we had a firm agreement and know the design requirements for non-Federal hydropower.

But it is not necessarily essential to have a firm construction schedule to come up with that agreement. The pacing factor, we believe, at the present time is an agreement to develop hydropower rather than establishing a schedule and then negotiating toward that.

MOVING AHEAD WITHOUT POWER

Senator JOHNSTON. Well, now, the first couple of years, at least, of work on lock and dam No. 3 would proceed on the same schedule with or without hydropower, wouldn't they? I mean, you have got to go out and do your excavation.

General BRATTON. There are certainly a number of things that could be done, the usual steps of construction that could proceed regardless of hydropower.

Senator JOHNSTON. That is at least 2 years' worth, right?

General BRATTON. Right.

Senator JOHNSTON. About 2 years, or how long? Maybe longer than 2 years?

General BRATTON. I wouldn't say longer than about 2 years, sir, for those types of things. The construction period for any one of these locks and dams is estimated to be between 4 and 5 years from the time you start construction to the time it is finished.

Senator JOHNSTON. All right. Well, why do we wait, then, to get hydropower, to get that worked out when you have at least 2 years of construction? You are going to do the same thing anyway; you are going to do your excavation, build your access roads, all of those things. Why are we waiting? Why do you wait to get everything completed before you let a contract?

General BRATTON. There is no physical reason why we would have to wait, sir. We get back to the requirement to spread the cost of the project out over a period of time so that no one year has large costs, and the costs cannot really be determined until we understand the cost-sharing arrangements which would evolve out of the hydropower agreement.

STATUS OF HYDROPOWER NEGOTIATIONS

Senator JOHNSTON. How much longer do you think it will take you to put together your hydropower agreement?

General BRATTON. It is very hard for me to estimate, sir. We made good progress this past fall in negotiating for the development of hydropower at lock and dam No. 3. The difficulty in negotiations at the present time is, first of all, the private parties involved have not decided what kind of a powerplant they want; second, the problem of providing the so-called upfront money to get started with it. This has been a problem for the sponsors in Louisiana. That hasn't been resolved yet, nor, indeed, has the basic question of how to share the costs.

Senator JOHNSTON. Well, of course, in order to have the upfront money, then you have to be able to work out a deal to sell the power, and they can't sell the power because they don't know what the construction schedule is.

General BRATTON. That is the position they are in today. They don't know what the construction costs will be.

Senator JOHNSTON. You don't want to give them a construction schedule because you don't want to have any peaks in the construction schedule, which is not delaying the project; it is simply making sure that it doesn't go as fast as it could go and making sure that you don't start until 1987 when you could start it in 1985. But that is not delay, that is something else.

General BRATTON. Well, as I say, sir, our approach was to try to firm up the commitment for hydropower, and when that was firmed up, knowing what we were going to build, the layout and design of the power installation and how the financing was going to take place, then move on from there with the plans and specs and the actual construction schedule for lock and dam 3.

EXPEDITING THE SCHEDULE

Senator JOHNSTON. General Bratton, look, if you don't want to get this project built on a certain schedule, I think you ought to say so rather than say, well, all these elaborate ruses. Who has the authority to order that it be designed by 1985?

General BRATTON. Well, it could work in one of two ways, of course. The Corps could recommend to the Secretary and the Secretary could recommend to the OMB that we accelerate the funding and the construction schedule. If that were accepted, we would perform along that line. The other way it could happen would be a direction from the Congress telling us to do something like that. It has to be one of the two.

Senator JOHNSTON. Are you prepared to recommend that to Mr. Gianelli?

Mr. GIANELLI. Excuse me.

Senator JOHNSTON. I was asking General Bratton if he was prepared to recommend the accelerated funding and construction schedule.

General BRATTON. The first thing I would ask Mr. Gianelli is if he is prepared to receive such a recommendation. [Laughter.]

Mr. GIANELLI. We will certainly always receive them if they are submitted, Senator Johnston. We would always receive them. [Laughter.]

Senator JOHNSTON. Would you entertain them? I know you have to receive anything that comes through the mail. [Laughter.]

Mr. GIANELLI. I don't think I could commit myself now, Senator. If the Corps makes a recommendation for a revised schedule, we will certainly take it up with OMB, which, of course, is a major player in this because of the limited funds that are available. That will all be considered and certainly we will develop an administration position if it comes up that way.

Senator JOHNSTON. That is what I am trying to get at. This really is an OMB show, isn't it?

Mr. GIANELLI. OMB is a critical player in all of our activities, Senator, as I am sure you know. They are the people that hold the purse strings.

ROLE OF OMB

Senator JOHNSTON. I know that. Don't allow me to dump on you if it is not your fault. If it is OMB, which I would guess it would be, let me go and—

Mr. GIANELLI. Let me say that OMB has been helpful in some respects, but I think, perhaps, they haven't moved as fast as we would like to see with respect to water development.

Senator JOHNSTON. Let me ask you this. If we could get OMB to look favorably upon receiving the documents, would that tend to make it easier for you to recommend?

Mr. GIANELLI. There is no question about that.

Senator JOHNSTON. All right. Well, OK. I will try to work on OMB. We have tried before, and you have been cooperative in the past when OMB has let you be cooperative.

Mr. GIANELLI. I thought you had been pretty successful, Senator.

Senator JOHNSTON. Well, we have worked hard on this project to get it where it is, and I would like to see it under contract in 1985.

Mr. GIANELLI. I just want to conclude, again, by saying that there is no deliberate attempt to slow the project down. I think the record should be clear on that.

Senator JOHNSTON. That is clear; it is on the record that OMB has said no funding peaks, and if they gave you a marching plan that says you can't increase funding more than it has been, then you can't do anything else.

Mr. GIANELLI. No, but I think in all fairness, Senator, the demands that, for example, an expedited schedule would place on the Corps' budget would be quite great. I think there has to be some balancing with what OMB would see as funds available for all of this.

L&A RAILROAD BRIDGE REPLACEMENT

Senator JOHNSTON. Now, regarding the recent legislation for the new railroad bridge in pool 2, what is the schedule for construction?

General BRATTON. We are proceeding on the L&A Railway replacement bridge in accordance with the authorization contained in the Fiscal Year 1984 Supplemental Appropriations Act. Removal of the existing railway bridge and construction of the replacement bridge is critical to insure the open-to-navigation date for pool 2 of about July 1987. We are presently working on developing a memorandum of understanding with the railroad and Department of Transportation (DOT) to insure that all parties can realize an equitable cost savings. Because it is apparent that about \$10.8 million in Federal highway funds could be saved if the railway bridge is relocated in advance of I-49 construction in the Alexandria area, I am interested in seeking reimbursement from the DOT for the additional outlays that will be made by the Corps of Engineers to construct the bridge.

Senator JOHNSTON. Thank you, Mr. Chairman.

Chairman HATFIELD. The Senator from North Dakota?

LAKE SAKAKAWEA, N. DAK.

Senator BURDICK. I would like to welcome you gentlemen to the committee. Before I describe my most modest request here today, I want to thank you for what you have done at the reservoir behind Garrison Dam. I think it is exceptional. I think the committee should know that the best fishing grounds in the world are in that area because of the reservoir there.

Chairman HATFIELD. By what assessment is that statement made? [Laughter.]

Senator BURDICK. I am not talking about salmon, now, Mr. Chairman.

Chairman HATFIELD. Oh, OK. [Laughter.]

Senator BURDICK. I am talking about fresh water fish.

Chairman HATFIELD. Oh, all right.

Senator BURDICK. I want to compliment you for getting it to a point for developing those recreational sites. I think that has been a great benefit to the area.

LAKE DARLING PROJECT

And now the modest request. In a recent letter to me about Lake Darling, you stated that the following must occur before construction: One, filing of an environmental impact statement; two, completion of section 221 local cooperation agreement; three, approval of a general design memorandum; four, approval of a feature design memorandum on downstream protection.

Can you give me a status report on each of these if you can?

Mr. GIANELLI. Yes. Let me ask the Corps to give you a report on that, Senator. I think the work is proceeding on that, but I would ask the Corps to give you a report on that.

Mr. STEINBERG. Sir, I don't believe the section 221 agreement has been discussed with the local sponsor. However, we are making good progress on the design memorandum. In checking on that this morning, the general design memorandum is moving ahead quite well, as is a design document for some local protection work downstream from the Lake Darling site. I believe it is at Velva, and that work, too, is proceeding. The design documents for these two projects have been approved by the North Central Division. However, as I said, on the items of local cooperation, I don't believe the requirements have been discussed with the local sponsor yet.

COST-SHARING REQUIREMENTS

Senator BURDICK. Well, in talking about time, when do we get to work out there? When will it be?

Mr. GIANELLI. Let me add to what Mr. Steinberg has said. I think perhaps you are referring—and I know we have had some discussions before, Senator, on the matter of cost sharing at Lake Darling. We have avoided trying to say exactly what the formula will be because we are hopeful that the administration and the Congress this year will agree to some formula that would apply to all these projects. So we have avoided trying to discuss with the local people exactly what that cost-sharing arrangement would be. But we are now nearing a point when the other work is being completed, and that such discussions can no longer be delayed. So we will have to come to grips with that here before too long.

Senator BURDICK. You are aware that the Public Works Committee acknowledged that this project was under construction; it wouldn't necessarily be hampered by any cost sharing.

Mr. GIANELLI. Yes, this is a unique project. You are absolutely correct, sir.

ADMINISTRATION'S POSITION ON COST SHARING

Senator BURDICK. Now, I understand the administration is talking about another formula, to describe it briefly, a project-by-project approach to these projects.

Mr. GIANELLI. No. I think what the President's letter indicated is that he is asking for more flexibility with respect to the whole matter of cost sharing, and that is what, as I indicated to Senator Hatfield earlier, I am encouraged by; the expression of the President that he wants to be more flexible in terms of dealing with the Congress on this issue. That is what the President was referring to, whatever can be worked out that is reasonable, with the Congress. I think the President is very desirous of doing that. I think that was one of the main thrusts of his letter.

Senator BURDICK. We reported out, more or less, the water resources authorization bill out of the Environment and Public Works Committee, and are you going to request an appearance to announce any change in this formula?

Mr. GIANELLI. I think the formula still has to be worked out, Senator, between the Congress and the administration. Each one of the omnibus bills treats the subject a little bit differently.

It is our hope, at least my hope, from my vantage point in the administration, that we will be able to join the House and the administration's and the Senate views to something with which everybody can agree. Then we can have one formula, if you want to call it that, for all the projects; one that would apply everywhere.

FUNDS TO INITIATE PROJECT CONSTRUCTION

Senator BURDICK. When the requirements that we have discussed have been met, how much funding will it require to initiate construction on Lake Darling?

Mr. GIANELLI. Senator, could we check that out and be back to you on that?

Senator BURDICK. You are aware we gave you \$1 million for preconstruction planning?

Mr. GIANELLI. Yes.

Senator BURDICK. I would be glad to hear from you.

Mr. GIANELLI. Thank you.

AGENCY ROLE IN WATER POLICY

Senator BURDICK. My other questions have to do with the administration's new water policy that differs on this cost sharing.

Mr. GIANELLI. Yes, I would just like to take a minute on that. Having worked with Secretary of Interior Clark on the statement for the President, I think the main message to come out of that statement is that the administration is much more flexible than perhaps might have been indicated earlier on the whole matter of cost sharing and working with the Congress to try and come out with some formula that is acceptable both to the Congress and the administration.

The President was not specific other than to say, in the interim, each agency would go ahead on a consistent basis to develop some sort of cost-sharing arrangements, subject, certainly, to whatever Congress and the administration will agree to jointly.

EAGLE BAY BRIDGE

Senator BURDICK. On another question, Public Law 91-611 gave authority to the Corps to construct a mile-long bridge across the Missouri River in the vicinity of Charging Eagle Bay. Do you remember that one in Dunn County, N. Dak.? For various reasons, the bridge project was not completed.

I am told that when the bridge was being considered about 10 years ago, that the Corps completed a preliminary bridge design and cost estimate. Since there is again interest in the bridge, I would appreciate your providing me with a current cost estimate.

Can you do that?

Mr. GIANELLI. Yes, Senator. We will give you the status and the cost estimate of that project. We don't have it here today, but we will certainly supply it to you for the record.

Senator BURDICK. Thank you, Mr. Chairman, and I didn't intend to downplay the salmon in your river.

Chairman HATFIELD. Thank you.

Senator BURDICK. But you have never really eaten a northern pike of the cold waters of Lake Sakakawea.

Chairman HATFIELD. I would be willing to test it. [Laughter.]

Is that something like a catfish? [Laughter.]

Senator BURDICK. Up to this moment we have been friends. [Laughter.]

Chairman HATFIELD. Thank you, Senator Burdick, for your questioning.

[The information follows:]

EAGLE BAY AND FORT YATES HIGHWAY BRIDGES

The authorized project provides for the Corps to construct a highway bridge across the Little Missouri arm of Lake Sakakawea and one across Lake Oahe, north of Fort Yates, N. Dak. The State of North Dakota would fund and construct the bridge approaches.

There is no current cost estimate. The project was placed on inactive status on 10 August 1977; opposition from the Indian tribes resulted in the withdrawal of State support. The estimated cost for the two bridges at that time was \$36.3 million, October 1978 price levels. During the followup to your question, it was learned that the Indian tribes have reversed their opposition and now support the project. Steps to reclassify the project to active status will be considered once the support, including that of the State, has been confirmed.

SPIRIT LAKE OUTLET

Chairman HATFIELD. Mr. Gianelli, I would like to turn now to Mount St. Helens. I appreciate the briefing that you gave us the other day on the progress on that, but could I make a little record here in terms of how it relates to the appropriations? As I understand the situation, we have a two-part project—the outlet from Spirit Lake, and then we have what is called a single retention structure which represents the more permanent solution.

Let me first turn to the outlet from the lake. You have, I believe, three options that you had developed, or more, at least?

Mr. GIANELLI. I think there were six all total that the Corps identified originally, Senator.

Chairman HATFIELD. Yes. Then you narrowed it down to three.

Mr. GIANELLI. That is basically where it stands at the moment, yes.

AUTHORIZATION REQUIREMENT

Chairman HATFIELD. Do you have the authority at this moment, so that you can move ahead with a permanent outlet at Spirit Lake?

Mr. GIANELLI. Yes. Let me speak to that, and perhaps I can get some help from the Corps, also.

I think our view is that we do have the authority, Senator, to proceed with a permanent outlet of Spirit Lake without any additional authority needed from the Congress. We are presently moving in the direction, probably, of one of the two tunnels, which I think we described to you, the tunnels, as I recall it, go to the west that were identified; two of the six that were identified in the Corps' report.

FUNDING REQUIREMENTS

We will be making a decision, hopefully by the end of this month, on further instructions to the Corps on which of those they should proceed with final plans. The hope is that we can start construction of a permanent outlet sometime this summer on Spirit Lake. Our funding requirements for this fiscal year—and I will ask Mr. Steinberg, perhaps to help me on this—can be made available from funds which the Corps has at this time.

Chairman HATFIELD. Public Law 84-99?

Mr. GIANELLI. Well, I don't know that they will be Public Law 84-99, but they will be funds which the Corps has for constructions. Perhaps Mr. Steinberg can elaborate on that.

With respect to the remainder of the funds, what we are talking about is a total expenditure of somewhere between \$20 and \$25 million for one of the solutions that we are probably going to come up with. It is my recollection—and again, Mr. Steinberg can help me on this—I think this year's requirement would probably be somewhere in the neighborhood of \$3 to \$5 million to start that work. The remainder of that \$20 or \$25 million would be required in the next fiscal year. I would like to have Mr. Steinberg address himself to the funding aspects.

Mr. STEINBERG. Senator Hatfield, we were anticipating the use of Public Law 84-99 funds, and we earmarked \$12 million earlier this year. We have set aside these funds, waiting for the time when the construction would actually start.

WORK SCHEDULE

Chairman HATFIELD. What is the estimated date of completion if you are able to keep this schedule?

Mr. GIANELLI. If we go ahead with one of the tunnel solutions, Senator, I think the construction time period would be somewhere around

15 to 18 months. Our expectation is we would start it this summer, for example, hopefully by July 1 or in July, so we would be through prior to the time that we had to go through a second pumping season. That means that we would still have to provide temporary pumping facilities this coming winter, but the construction would be completed before we got far enough into the next winter. Therefore, we should not have to carry on the pumping operations for a second season.

Chairman HATFIELD. Do you have sufficient funding for that continued pumping activity?

Mr. GIANELLI. I think we have funds to carry out that work.

Mr. STEINBERG. Yes, sir, we do.

SOURCE OF FUNDS

Mr. GIANELLI. Before we leave the funding, let me ask Mr. Steinberg, we will need the additional funds whatever it amounts to, \$20 or \$25 million, in the next fiscal year. Will we have to get assistance from Congress on the special authorization or special appropriation for that?

Mr. STEINBERG. Since we are using Public Law 84-99 funds, a lot would depend on the demands of that fund elsewhere in the Nation. There have been numerous floods, and we are fixing up some of the structures that were damaged, but we did set \$12 million aside, and those funds are not sufficient, in my view, to satisfy the \$20 to \$25 million required to complete this work.

General WALL. Senator, we haven't decided yet whether we are going to recommend the use of Public Law 84-99 funds or whether we are going to come in for separate appropriations. We haven't bitten that bullet yet, so we may need some help from you on that.

Chairman HATFIELD. If you come for other than Public Law 84-99 funding, you are going to face the matter of timing and what vehicle you make that request under. The regular appropriations bill for 1985 will be moving quickly—probably in the May-June timeframe. I don't want to see this dropping between the cracks.

General WALL. No, sir.

Chairman HATFIELD. Since we do have a supplemental coming along, would it be possible for you to decide on how to fund this by the time the supplemental is put together?

Mr. GIANELLI. I think we have the funding put together for this year, so we have a little time, but I think you are absolutely right. I think we have to decide what sort of funding source we are going to use. If we are going to use other than Public Law 84-99, as you say, we will have to come in. The Corps doesn't have the kind of money that can be diverted. You are absolutely right. We will have to bite that bullet, but we have time in the next couple of months, and we will certainly work with you and other Members of the Congress on that issue.

Chairman HATFIELD. Do I understand, as you use these figures, that you may have to have somewhere between \$8 and \$13 million in addition to finish the project if you went the Public Law 84-99 funding route?

Mr. STEINBERG. That is our estimate, yes, sir. Pending any guidance to the contrary, we will probably use Public Law 84-99 funds.

SINGLE RETENTION STRUCTURE

Chairman HATFIELD. Let me turn to the so-called single retention structure, Mr. Gianelli. As I recall the briefing in Senator Gorton's office the other day, you indicated that a feasibility report will be completed late this year.

Mr. GIANELLI. This fiscal year, yes.

Chairman HATFIELD. This fiscal year?

Mr. GIANELLI. Yes.

Chairman HATFIELD. Could you specify a little more as to what you mean, is that October 1984?

Mr. GIANELLI. Yes. I think we are shooting for an October 1984 submittal to the Board of Engineers for Rivers and Harbors.

Chairman HATFIELD. As I recall, Mr. Gianelli, we had, as distinguished from the feasibility report, also a comprehensive report or plan that has been completed.

Mr. GIANELLI. Yes, Senator. That report was submitted to you and others and the President last November.

Chairman HATFIELD. Now, my question is, why can't, in light of the fact that we have the comprehensive report, why can't the feasibility report that is underway be completed sooner than October this year?

Mr. GIANELLI. The Corps is doing the final work on the feasibility study. The level of detail that they are now doing was not done in connection with the overall plan. What the Corps is concentrating on now is the further necessary work leading to the staging of the single retention structure. At the same time, they are reviewing the possibility of a lower site, the capacity that might be built into an LT-3 site. So I think the feasibility report will do two things. It will make it clear, for example, what the cost estimates are for whatever solution looks the most appropriate.

We will continue exploration work needed for the single retention structure and its staging, plus look at the spillway design at the LT-3 site. That should set the stage for the Congress to consider a specifically authorized project for the long-term solution.

That is what I expect to come out of the feasibility report sometime later this year. We will keep the committee informed on the current schedule as work on the report continues.

Chairman HATFIELD. Let's take that just step by step.

Mr. GIANELLI. Yes.

Chairman HATFIELD. Because it seems to me we have a problem here of moving at a pace that is going to be the most economical in the long term and the longer we delay that retention project, we are continuing to have to dredge the Columbia.

Mr. GIANELLI. Well, that is correct, not only the Columbia River, Senator, but the—

Chairman HATFIELD. And the Cowlitz, right?

Mr. GIANELLI. Right.

Chairman HATFIELD. That is right. So there is another expense that adds to the equation.

Mr. GIANELLI. Yes.

FUNDING SEQUENCE

Chairman HATFIELD. As I see it, the 1985 budget provides only money for further review for this project; is that correct?

Mr. GIANELLI. That is correct.

Chairman HATFIELD. Then, it seems to me that if that is what is included in the 1985 request, you are really saying that construction will not be requested until the 1986 budget or in a supplemental; is that right?

Mr. GIANELLI. That is right, and let me say that the Corps will require, when it finally makes a decision on precisely which direction to go in the feasibility report for a solution, probably about a year for final design, Senator. And, in that regard, the need to undertake a feasibility study was the basis for our request for supplemental general investigations funds in fiscal year 1984 and in our request for \$4 million in fiscal year 1985 for the Cowlitz River studies. It will not require a very heavy expenditure such as will be required when you actually get into the construction.

But I think your assumption is correct that probably the big budget year, that is the first budget year involving a major expenditure for construction, will be in the 1986 timeframe.

Chairman HATFIELD. Do you rule out a possibility of a supplemental before that time?

Mr. GIANELLI. I am not sure, and the Corps will have to speak to this. I am not sure they will be ready for that, Senator, because it will be a complicated project; it will take the Corps some time for design, and I don't know whether the Corps could expedite that project or not. I think they will have to address that question.

COLUMBIA RIVER DREDGING

Chairman HATFIELD. Let me ask you two related questions that relate to the dredging of the Columbia River, although, as we indicated, there are dredging activities in the Cowlitz as well.

Do you have sufficient funds in the 1985 operations and maintenance budget request to maintain the Columbia River channel at project dimension?

Mr. GIANELLI. Yes. The answer is yes.

Chairman HATFIELD. You do. All right, then do you have adequate sites for disposal of the dredged material to cover the timeframe and schedule we have outlined? That has always been one of our problems, as you know. So, viewing a construction start in 1986 and a construction period of several years, we are looking at not only the cost of continuing dredging, but also the need for disposal areas.

Mr. GIANELLI. Let me see if I can clarify, first. I think we have two problems of where we deposit the material, Senator. We have the problem along the Toutle and the Cowlitz, and that is a very severe one, and there are limited areas. We think we do have enough area, for example, to get by there for however long it takes before we can go to permanent solution, although we will still have to do some dredging even after we put a permanent solution into place.

The Columbia River is another problem, and certainly there are problems with respect to disposal areas. But let me ask the Corps if they could respond to that part of the problem, which I think is going to be one of your major concerns.

General Wall?

General WALL. Sir, I think we have enough disposal areas barring a catastrophic event, which we may be having right now. We are expecting something, but I don't know what the effects could be. However, assuming nothing else happens to us, and we have the normal dredging to do, I think we are all right for the next 2 or 3 years. I think it is problematical on the Columbia after that. We are going to have to look around for some other sites.

Chairman HATFIELD. For 2 to 3 years?

General WALL. Yes, sir.

IMPACT OF FUTURE ERUPTIONS

Chairman HATFIELD. Let me ask you that question I was going to follow up with. Is it conceivable that the present rumblings or some future rumblings during this whole design and planning process could totally wipe out your present strategy in dealing with either or both the Spirit Lake outlet and the retention structure?

Mr. GIANELLI. Let me say this, Senator. I don't think anyone can tell what Mother Nature is going to do at Mount St. Helens. As you know, there are rumblings right now. I think General Wall alluded to that, which would require us to move our personnel out, for example, from the pumping plant until the thing settles down.

Now, the experiences we have had subject to the major eruption that took place in 1980 are such that it hasn't presented a major problem to us. I think if we have continuous events that are of the magnitude experienced in the last 2 years, we can deal with them with our present solutions. Obviously, if it blew off another big piece of the mountain in another direction, we would have to deal with it. But I would say this, having spent a lot of my own time up there and being very deeply involved with this problem, I feel very comfortable with what we are coming up with in the way of solutions as a means of handling the problem the best we can see it as it will occur. But again, I think we are dealing with something that has happened up there we have never experienced anywhere in the world. So we are dealing with something that has a lot of uncertainty connected with it. But if there is some eruption and it is a moderate spilling of lava or whatever down the mountain, I think we will be able to cope with that with the solutions that we are proposing.

MOUNT ST. HELENS MONITORING

Chairman HATFIELD. Do you have a volcanologist, or are you in constant communication with such experts in trying to monitor the potential of what may occur?

Mr. GIANELLI. The Corps works very closely with the U.S. Geological Survey, and the U.S. Geological Survey, I guess, is our Government's expert in the areas of seismology and movement of the material and behavior of volcanoes. They are working up there and have been working up there with the Corps.

I think one of their influences, for example, was on the Spirit Lake outlet. As you may recall, it was my hope that we could build some sort of a conduit through the embankment because that would save a year of construction.

Chairman HATFIELD. Right.

Mr. GIANELLI. U.S. Geological Survey, subsequent to our report, indicated that they thought there might be risks associated with doing that even though we could get the job done a year earlier. I think that has had an influence on what I expect us to come up with as a solution to Spirit Lake. So I guess the long and short of the answer to your question is we are working very closely with the USGS. They are the foremost experts in the field as far as we know, and there is close collaboration.

Chairman HATFIELD. Thank you.

COLUMBIA RIVER AT THE MOUTH

General Bratton, I would like to turn now to the mouth of the Columbia River project. I understand that we are about ready to advertise for bids for construction for the deepening of the Columbia River at the mouth from the present 48 feet to the 55-foot depth level. Could you give me a schedule of what you anticipate and also a completion date in that schedule?

General BRATTON. I don't know whether I can be precise in the schedule or not. We are about ready to—I wonder if it might be satisfactory, sir, in order to be precise, if I put that in the record.

Chairman HATFIELD. Yes. Would it be within the ballpark, according to my understanding, to say that contingent upon getting a satisfactory bid, that it is possible that this project could be completed during calendar year 1984?

General BRATTON. Yes, sir, I think construction is scheduled for completion in September 1984.

Chairman HATFIELD. I want to commend you, General Bratton, on moving expeditiously on this project. This is very important, and I will welcome the more precise schedule of those dates that you expect in order to get the project underway.

[The information follows:]

SCHEDULE FOR CONTRACT AWARD—DEEPENING OF COLUMBIA RIVER

The current schedule for deepening the channel at the mouth of the Columbia River calls for a request for bids to be advertised in mid-February, an opening of bids in mid-March, and an award of contract by April 1, 1984.

BONNEVILLE NAVIGATION LOCK

Chairman HATFIELD. Let me turn to the Bonneville navigation lock, if I could. Is all of the work completed that can proceed without authorization of the Bonneville lock replacement?

General BRATTON. It is my understanding that we have been funded for as far as we can go, short of the authorization; yes, sir.

Chairman HATFIELD. But you have not yet completed the final draft design memorandum, have you?

General BRATTON. We have not done that.

Chairman HATFIELD. Is July still the date that you expect it to be completed?

General BRATTON. We should be finished this year with all we can do until the second lock is authorized.

Chairman HATFIELD. So that the draft of the general design will be completed in this calendar year?

General BRATTON. Yes, sir.

Chairman HATFIELD. And that is as far as you can go without authorization?

General BRATTON. I don't know what more we could do until it is authorized, Senator.

Chairman HATFIELD. All specifications, all design, all preliminary surveys, all preliminary engineering, all of the other matters will have been completed?

General WALL. All preconstruction planning up to plans and specs will be completed this fiscal year, sir, not in the calendar year.

PROJECT PRIORITY

Chairman HATFIELD. This fiscal year. I don't want to belabor the point, but to merely restate the situation that Senator Byrd had raised relating to the Gallipolis project, I can only say a second lock at Bonneville Dam is the most important project to me and our region.

Mr. GIANELLI. That is easier to say than Gallipolis.

Chairman HATFIELD. If we are able to, from a legislative point of view and within the scope of the administration's policies that we are going to work together on, Mr. Gianelli, within those parameters, would you agree that the Bonneville lock is one of the top-priority replacement projects the Corps has on its schedule?

Mr. GIANELLI. It is a high priority, Senator.

Chairman HATFIELD. Yes, high priority. Are there higher priorities?

Mr. GIANELLI. I don't know that. Certainly, the administration hasn't ranked projects in terms of their priority, but there are a number the Corps considers to be perhaps of higher priority than others, and I think this is one that is in that category.

Chairman HATFIELD. As I recall, there are three or four, maybe five, that you have indicated as being the highest priorities across the country; is that correct?

General BRATTON. Yes, sir. I don't know of any project of this nature, a lock and dam project, that has a higher priority than Bonneville and Gallipolis. We generally lump the two of them together.

Chairman HATFIELD. The two of them together?

General BRATTON. Yes, sir.

Chairman HATFIELD. So that then we could indicate that if we were to, say, build three, that they would be included among the top three, or if we were to build four, they would probably be in the top four, and you are telling me that if you were to build only two, that it would probably be these two?

General BRATTON. I am not sure that I can speak for the administration, but under the priority system of the Corps of Engineers, certainly, if we were to build four, they would be included. If we were to build three, they would be included. If we were to build two, there might be some argument. I am not sure.

Chairman HATFIELD. And if we were only to build one, it would be Bonneville. [Laughter.]

That is the bottom line.

Mr. GIANELLI. You have to remember, General Bratton will be gone this fall, Senator, so he will finish his tour.

Chairman HATFIELD. You can supply that for the record. [Laughter.]

I think we have an understanding on which one would be build, don't we?

Mr. GIANELLI. Senator, I would say you are in a key position to have some influence in this regard.

Chairman HATFIELD. Thank you, Mr. Gianelli. I appreciate that observation.

Gentlemen, we appreciate the time you have given to come up here this morning. We have other questions that I will submit to you in writing. Thank you again. It is always a pleasure to do business with you.

SOUTH CAROLINA WATER AQUIFER

Chairman HATFIELD. Senator Thurmond has been in touch with the subcommittee regarding the intrusion of saltwater into the South Carolina aquifer. Could you provide for the record a short narrative description of the problem and an indication of the authority and Corps capability to study possible solutions in 1984 and 1985?

General BRATTON. The State of South Carolina is concerned over the potential for saltwater intrusion into the aquifer in the Hilton Head area. Accordingly, the State and the USGS have prepared a plan of action for delineating and monitoring the aquifer in the vicinity of Hilton Head, S.C. The plan of action involves both land and offshore test sites. The State requested the Corps to drill and evaluate 10 offshore test sites requiring an expenditure on the order of \$400,000 to \$600,000 depending on the weather and whether or not mobilization and demo-

bilization will be required more than once. The Corps has the necessary equipment and could provide assistance on a cost-reimbursable basis with the offshore test sites; such work is not part of a Corps' feasibility study.

Chairman HATFIELD. Also could you indicate what action the State of South Carolina has taken to provide funds toward a coordinated study with the Corps?

General BRATTON. The Corps does not purport to speak for the State of South Carolina, since the State's efforts have not been coordinated in detail with the Corps. We understand that the State has prepared a plan of action for monitoring the aquifer in the area of Port Royal Sound at the north end of Hilton Head Island and have secured funds for executing the land segment of the plan of action. The State has not yet offered to provide funds to the Corps for drilling and evaluating the 10 offshore test sites.

Senator BURDICK. Mr. Chairman?

Chairman HATFIELD. Senator Burdick?

LAKE DARLING PROJECT

Senator BURDICK. Mr. Steinberg, I forgot to ask you, you say all the elements I referred to on Lake Darling are in the stage of being completed with the exception of the section 221 local cooperation agreement; is that correct?

Mr. STEINBERG. We discussed the design documents and the 221 agreement. I don't believe we got around to the EIS. I would have to check on the status and provide it for the record. I know they are working on it.

[The information follows:]

STATUS OF EIS—LAKE DARLING PROJECT

The EIS for the Velve unit is scheduled to be submitted to the Council for Environmental Quality (CEQ) and the Environmental Protection Agency (EPA) in March 1984. The EIS for the Lake Darling project itself is scheduled to be submitted to the CEQ and the EPA in May 1985.

Senator BURDICK. What is the time schedule on when you get a final report on each one of these, estimated?

Mr. STEINBERG. We are ready to go and discuss the section 221 agreement with local interests, but before we can sit down and work something out, we have to know what formula we are talking about; and as you pointed out, S. 1739 does have a provision in it which would clearly indicate how Lake Darling would come out in the event that bill got enacted. So, until we have an ability to sit down and talk formulas, it becomes difficult to work up any schedule.

Senator BURDICK. We were under the impression that you may be doing this on a case-by-case basis instead of under the formula. Now, which is it?

Mr. GIANELLI. I think the President indicated that there was certainly more flexibility in terms of cost-sharing arrangements than the ad-

ministration had previously orchestrated. I don't think he specifically indicated exactly what the formula would be, but he is leaving that to each agency, Senator; at least those are the instructions that have come down.

Senator BURDICK. What I am trying to get at is, can you tell me now what the timetable will be now if everything goes smoothly?

Mr. STEINBERG. I believe June 1984 is the date. That is the best information I have when the district will sit down with local interests.

Senator BURDICK. I see. Do you know how much funding would be required after that?

Mr. STEINBERG. I don't have a number.

Senator BURDICK. What is your funding capability for 1985?

Mr. STEINBERG. As we indicated a little earlier, we are still looking at that, and we will provide that for the record. I don't have that at the present time.

Senator BURDICK. That is right.

STATUS OF ADMINISTRATION'S COST-SHARING POLICY

Mr. Gianelli, I just have one final question. Earlier, you indicated that the administration would be working with the House and Senate to develop a formula for all these projects. Does this mean that the administration's new policy is just a temporary policy, or what is the administration's policy?

Mr. GIANELLI. No, I think there are a lot of projects, Senator, that are being held up pending the working out of some arrangement with respect to cost sharing. I would expect that out of the deliberations of the Congress in both the House and the Senate, with the administration providing input, that there will be a permanent solution to this. It is not going to be temporary, because I think we need to have something we can rely on to move ahead.

LAKE DARLING PROJECT

Senator BURDICK. At least after what dates are we ready to talk about money? You gave me a date when these four or five features would be concluded one way or another.

Mr. STEINBERG. The design of the downstream local protection work is moving ahead very nicely. As I indicated, I checked this morning, and that design is close to being approved right now. The general design memorandum on the dam itself is also moving through the review process, and the June 1984 date was based on the design having been reviewed and approved. Then we would be ready to sit down and talk about the requirements of local cooperation and sign a 221 agreement.

So between now and June, if the exact formula on a case-by-case basis can be worked out precisely, then we could be moving to some time beyond June, toward a construction schedule.

Senator BURDICK. What I am getting at is, can there be construction in fiscal year 1985 and how much money would be required?

Mr. STEINBERG. It could be, if the agreements of local cooperation are ironed out. I will have to furnish our dollar requirements for the record.

Senator BURDICK. I see. Thank you, Mr. Chairman.

Chairman HATFIELD. Thank you, Senator Burdick.

[The information follows:]

FUNDING REQUIREMENT, LAKE DARLING, N. DAK.

Subject to the previously stated qualifications—and recognizing that Lake Darling was authorized without a Corps report and, as yet, we have no approved plan—the fiscal year 1985 requirement for the Lake Darling project would be \$3 million. Lake Darling is in the fiscal year 1985 budget for \$1 million to continue engineering and design work. With an additional \$2 million, the Corps could initiate construction of the Velva unit in early fiscal year 1985, provided the deliberations of Congress and the administration are fruitful in regard to cost sharing and financing.

ADDITIONAL QUESTIONS FOR THE RECORD

Chairman HATFIELD. Now, I will give you these additional questions for your response. We would appreciate your timely response.

[The questions and answers follow:]

ADDITIONAL QUESTIONS SUBMITTED BY CHAIRMAN HATFIELD

FEDERAL ROLE IN WATER RESOURCE DEVELOPMENT

Senator Hatfield. Now, Mr. Gianelli, this budget is really no different than the budget request of the past year or two - continued completion of ongoing projects and the continued reduction in the studies and planning for future work. The only major issue is one of policy - What is the role of the Federal government in water resource development going to be?

Mr. Gianelli. I quite agree that the philosophy and structure of this year's budget request is no different from those of the past year or two. The Corps study program is consistent with the continuing stalemate with regard to water project construction. There is no reason to continue to plan projects when we already have a backlog of work awaiting construction or further design funding. It is essential that Congress act to give the water resources program a new charter, a charter which acknowledges today's budgetary realities and funding priorities. Moreover, Congress should allow the 14 new starts which we have proposed to proceed in accord with the new funding arrangements which have tentatively be agreed to with the local sponsors. I am encouraged that the policy committees of the Congress are addressing this issue and hopefully the Congress and the Administration will agree on the appropriate role.

NATIONAL WATER POLICY

Senator Hatfield. On January 24, 1984, President Reagan set forth a more flexible approach to water project cost sharing and financing in his letter to several western Senators. In light of your past strong support for fixed minimum percentages, what does this "new policy" mean to you and projects under your jurisdiction?

Mr. Gianelli. The President's statement of water policy indeed does allow greater flexibility in negotiating cost sharing and financing arrangements than has been followed in our budget formulation process. The President's letter also acknowledged the need for consistency for the individual project purposes in seeking new cost sharing arrangements. I think that the major import of the new policy is that in the case of future projects, we will be taking a close look at each financing proposal to assure that it is, as required by the President's statement, a reasonable one in light of the circumstances peculiar to a specific project. We all recognize, however, that civil works projects do produce tangible economic benefits which should be utilized to lessen the burden on the Federal Treasury wherever possible. The uniqueness of each type of project output should be considered, of course.

Senator Hatfield. Also, the Administration has requested funding for 14 new construction projects where fixed minimum cost sharing arrangements had be negotiated. How will these projects be handled? Will there be an opportunity for renegotiation?

Mr. Gianelli. We have in times past outlined the arrangements informally agreed upon with project sponsors on the 14 projects for which we are requesting construction funding. Indeed the President has affirmed them in his FY 85 budget. Since these projects all have an agreement from the local sponsor as to its willingness to fund them on the terms reflected in our budget submittal, they are reasonable, it seems to me, and they are, in light of our previous budget policies, consistent. We see no reason why final negotiations should not take place once the Congress approves our going ahead. We have emphasized, however, that if Congress and the Administration agree on other arrangements we will certainly make whatever modifications are necessary to reflect any such agreement.

Senator Hatfield. The President's letter also stated that the Administration will strive for consistency with attendant equity. Could you be more specific on how the Administration will provide consistency between the Corps, Bureau of Reclamation and Soil Conservation Service projects?

Mr. Gianelli. Consistency among agencies is the responsibility of the Office of Management and Budget. We would expect that agency to fulfill its role with regard to assuring consistency in water project financing. The role of the Office of Management and Budget in overall management of cost sharing negotiations is specifically acknowledged in the President's letter to Senator Laxalt.

Senator Hatfield. Without more formal, uniform cost sharing and financing requirements, aren't you opening yourself to criticism or favoritism or charges of providing sweetheart deals for politically important projects?

Mr. Gianelli. The Army will continue to follow cost sharing guidelines like those that have guided our previous budgetary formulations. We intend to avoid the kind of criticism that you suggest is a real possibility. Consequently, any case which deviates from our general policy will be fully documented. We see no other way to effectively manage such a large program as the Civil Works Program and not subject ourselves to the kinds of criticism you raise.

Senator Hatfield. Another concern is that this policy continues to favor those states or localities which can afford to provide a larger cost sharing percentage. How do you plan to provide balance and attention to those areas that cannot afford to participate at higher levels?

Mr. Gianelli. We have continually emphasized that the cost sharing and financing policies we have advocated are tied to the benefits which projects produce and not to the individual States themselves. They do not favor any group beyond those favored by our project formulation and justification process, that is to say, they favor the productive projects. This has been a characteristic of the water program since its inception and one reason we use the benefit-cost ratio as a measure of the project's feasibility. I think there is a broad consensus that we ought to favor projects which are productive over those which are not. Financing policies which we have been following and which we will continue to follow favor the productive projects.

Senator Hatfield. Will budget recommendation be made solely on how much non-Federal participation is involved?

Mr. Gianelli. Projects recommended for initiation of construction will not only have acceptable financing and cost sharing arrangements but will be fully acceptable in terms of the wide variety of criteria, such as compliance with all applicable laws and conformance with environmental standards that have been applied to the Civil Works program for several years.

WATER RESOURCE AUTHORIZATION LEGISLATION

Chairman HATFIELD. Mr. Gianelli, your statement mentions the two pending omnibus authorization bills in the House and Senate. The so-called Roe Bill includes 170 new projects with a total estimated cost of \$12 billion and Senator Abdnor's Bill authorizes 130 new starts with a price tag of about \$8 billion. Do you generally support these bills?

Mr. GIANELLI. As you know, Mr. Chairman, these bills have a very large number of provisions and differ substantially from one another as well as from positions taken earlier by the Administration on many of the policies and projects addressed by them. We have taken the position that it is inappropriate at this time to express specific views on them. We do expect to make clear our views at the time these bills go to the Conference Committee.

Chairman HATFIELD. What is your assessment of the prospects for these bills in this session?

Mr. GIANELLI. It is frankly difficult for me to assess the prospects for the bills. I think it is going to be difficult to reconcile the many divergencies between them although there may be greater commonality reached as they proceed through the legislative process. We all know that this session of Congress will be a short one and that there are many other pressing items. I remain optimistic that there is a reasonable chance that Congress will be able to agree on a legislative package addressing water resource projects in a way that is acceptable to the Administration.

Chairman HATFIELD. On page 6 of your written statement you indicate opposition to the House-passed new starts appropriations bill, H.R. 3958, which provides for 43 new projects with a total cost of \$5.2 billion. Since this bill appropriates funds for these new projects subject to authorization and therefore new cost-sharing arrangements, what is your objection to the bill? Is it the total cost?

Mr. GIANELLI. We are concerned with the total cost of the projects funded. To be sure, we are concerned that some of the projects that we recommended as new starts are not included, and we are concerned that other projects, some of which we have not yet reviewed, are included. We think it is bad policy to fund projects which have not been authorized, particularly since the financial terms on which they are authorized may affect their feasibility in terms of the willingness of the local sponsors to proceed with them at this time.

Chairman HATFIELD. The Senate Appropriations Committee reduced substantially the size of the House-passed bill to 27 projects with a total cost of \$3.2 billion (\$78 million is appropriated for FY 84 to start the projects). The Committee appropriated funds for these new projects subject to authorization. So can we assume you would support this Senate effort to begin to bring some life back into the construction program and have projects funded in the event authorizations are enacted? If not, what changes in the Senate bill would make it acceptable?

Mr. GIANELLI. Frankly, we are, as indicated earlier, concerned about funding projects on the presumption that there will be new financial arrangements for them without specifying those new financial arrangements. If there is to be a truly effective Federal and non-Federal partnership for water development, non-Federal participants should make their views known as to their commitment to the projects, given the specified financing and cost-sharing provisions. The only projects on which we have agreement of local sponsors to proceed under new financing arrangements are the new starts that the Administration is proposing, and it is on those projects that we should be proceeding.

CARRYING OUT CONGRESSIONAL INTENT

Chairman HATFIELD. Mr. Secretary, I must say that you have done much to focus public attention on the importance of water resource development projects.

Yet, in three incidents your office has delayed or blocked the will and intent of Congress as expressed in Public Law for whatever reason.

In the case of the Snettisham project in Alaska, Congress has twice spoken its intent to proceed with project construction. Then in PL 98-63 the Army was directed to "start project construction of the Crater Lake phase of the Snettisham project. . ." Now, I have a copy of a memo from the Office of the Chief Counsel which says basically that yes, you were required to start construction, but you could stretch out and delay advanced engineering and design indefinitely.

The other two projects where Congress has clearly indicated its intent are on the Port Canaveral Harbor in Florida, and Fishermen's Wharf project in California.

Now, why is it necessary for you or your office to seek ways to thwart the will of Congress?

Mr. GIANELLI. It is not our intention to thwart the will of Congress. What we have been trying to do is to make what seems to some of us as much sense as we can out of some of these things, recognizing the constraints, particularly from a budgetary standpoint, that we have. As you will recall, Mr. Chairman, I have been forthright, from the very beginning, in expressing my concerns to this Committee — and to the House Appropriations Committee — regarding the projects you have mentioned. On February 2, 1982, for example, I wrote a six-page letter to you and to Chairman Bevill and shared my concerns about the Snettisham Project and several other projects that raised important program issues. In that letter, I invited Congress' further consideration of the issues raised, and expressed the hope that we might profit from that consideration.

Since that time Congress has given further consideration to several of these matters. The result, Mr. Chairman, as you well know, in the case of the Snettisham Project, is that, in accord with P.L. 98-63, the 1983 Supplemental Appropriations Act, construction will start in Fiscal Year 1984. Moreover, the 1985 budget contains \$10 million to continue construction by the Federal Government of this \$70 million hydropower project. Similarly, in the case of Fisherman's Wharf, which was authorized by P.L. 98-151, the Continuing Resolution, on November 14, 1983, the 1985 budget includes \$3 million to enable construction of this \$19 million project to proceed. Finally, with respect to the Canaveral Harbor Extension, the Corps of Engineers does not yet have a position on the benefit-cost ratio for this project and, in this time of large Federal budget deficits, we have deferred consideration of whether or not to request funds for this harbor extension project until its economic merits have been established.

EMERGENCY JOB BILL

Chairman HATFIELD. Secretary Gianelli, your detailed statement speaks in glowing terms about the significant employment benefits produced by the \$389 million appropriated to the Corps of Engineers in the Jobs Bill. Yet, as I recall, the Administration's policy statement strongly opposed funding for Corps of Engineers water resource activities in the Jobs Bill. How do you explain this turn-around?

Mr. GIANELLI. The Administration's opposition to funding water resource activities in the Jobs Bill was based on the recognition that these kinds of projects are not the best way of creating jobs if, in fact, it is appropriate to use fiscal policy as a means of jobs creation. Notwithstanding that, we all recognize that the projects do create jobs, and in reporting that information to you we were acknowledging the fact that the Corps was able to execute the program in a timely way and to produce the benefits intended.

CONTINUING AUTHORITIES PROGRAM

Chairman HATFIELD. I see that you are applying the Administration's proposed cost-sharing and financing policy to the Continuing Authorities Program. In addition, you are instituting a new 5-step process for studying and implementing these projects. As you know, this has been the only program in the Corps over the past few years when any new work has been accomplished. It seems to me that we are closing off one of the last avenues to accomplish much needed flood control, small navigation and other work around the Nation. Would you comment on this and the impact in terms of years that projects may be delayed by this new process?

Mr. GIANELLI. Our new process for studying and implementing continuing authorities programs is designed to streamline the program and to bring these programs into line with the policies we have proposed for individually authorized projects. We see no reason why the new process should delay projects. Indeed, the process is designed to assure that the projects that emerge from the planning process are those which local sponsors are willing to implement and that implementation of the project can begin as soon as the project is approved by the Chief of Engineers. We don't want to have continued the situation which has often occurred in the past, where there is a substantial delay between the time that the project is designed and approved and when it is executed.

Chairman HATFIELD. What is your authority to make these changes in light of specific law which sets up cost ceilings and other rules limiting which projects are eligible for funding?

Mr. GIANELLI. The cost-sharing changes which we propose are based on the belief that non-Federal interests will willingly bear a portion of study costs or a greater portion of construction costs where water resource problems exist and actions are required to identify and develop solutions to problems. The fixed Federal cost limits, or cost ceilings, applicable to the continuing authority programs presently results in local interests contributing more than required for some small projects. In other words, the large projects, in each of the programs do, on occasion, exceed the Federal limit calculated on a traditional cost-sharing basis. In the interest of moving such projects to construction, local interests have voluntarily contributed the extra funds. The authorities to accept these contributions of funds are found in 33 USC 560 and 33 USC 701h. These statutes authorize the Secretary of the Army, on recommendation of the Chief of Engineers, to accept contributions of funds and to expend them in connection with Federal appropriations on authorized flood control and river and harbor improvement work. The Corps is not modifying legal requirements of cost-sharing for studies and projects. Requirements of cost-sharing set forth in project authorizations and specific statutes are considered minimum requirements on non-Federal participation in projects and do not as a legal matter prohibit non-Federal interests from voluntarily providing contributions over and above these minimum amounts.

Although the 5-step process is in place, the cost-sharing provisions which we propose are not yet being implemented. We are hopeful Congress and the Administration will address the matter of water project financing and cost-sharing, and that guidance will emerge this year.

BONNEVILLE NAVIGATION LOCK

Chairman HATFIELD. Last year you stated that, based on 1981 traffic and projections, the capacity of the present Bonneville Navigation lock would be exceeded by 1988. Is that assumption still valid?

General BRATTON. Sir, the most recent economic evaluation of a new lock at Bonneville indicates that the lock would be feasible if in-place in 1990. The 1988 capacity date is from a January 1981 update of the Bonneville Lock Feasibility Study and is based on achieving an estimated physical capacity of 95%. Our current economic analysis indicates that tow delay will become so significant, before the 95% capacity is reached, that it will be economical to

build the lock prior to the 95% utilization level. In fact, delay costs will become so significant that shippers will divert tonnage from the waterway and the lock will not reach the 95% operating level for many years.

Chairman HATFIELD. What is the current estimate of benefits? Please comment on current experience in lower traffic now using the lock than in past years for such reasons as economy factors, railroad rates, etc.

General BRATTON. Sir, annual benefits based on October 1983 price levels, 50-year life, 8-1/8% interest rate total \$24,262,000. We expect that the current low traffic volumes will be short lived. Current economic factors such as the high value of the U.S. dollar, which raises the price of Pacific Northwest grain in international markets, are expected to moderate. Traffic volumes on the Columbia-Snake Inland Waterway will return to historical rates of expansion, upon which these benefits are based.

Chairman HATFIELD. What is the impact, if any, of the Staggers Act, which deregulated rates that railroads would charge rail shippers?

General BRATTON. Sir, there has been a lowering of rail rates in the grain growing regions of eastern Oregon and Washington. This is probably the result of current deregulation trends in the transportation sector, including the Staggers Act. Union Pacific Railroad lowered its rates in the Columbia River Basin downstream from Lewiston, Idaho, in June 1983. This makes the case that its rate change was an attempt to fully utilize surplus equipment. As a result, this change may be short lived. Burlington Northern Railroad lowered its rates in response to the Union Pacific action. The barge industry has responded by changing pricing practices. Consequently, it is expected that the Staggers Act will not lead to a significant shift in the share of grain between rail and waterway modes over the long run.

Chairman HATFIELD. Once all added costs are put in, the benefits adjusted, assuming an authorization/new start in, let's say, FY 1985; what is the approximate B/C ratio?

General BRATTON. Sir, based on our current working estimate, the benefit-cost estimate appears to be in the range of 1.2 to 1.3, using October 1983 price levels, 8-1/8% discount rate and 50-year project economic life.

Chairman HATFIELD. Assuming this project is authorized for construction in FY 1984, could you initiate construction in FY 1985? If so, describe the work which would be accomplished.

General BRATTON. Yes, sir, contract work could be advertised and awarded for stabilization of Tanner Creek Slide and excavation of Bonney Rock, Bradford Island channel, and the downstream channel. In addition, Real Estate acquisition for Relocation could be initiated.

Chairman HATFIELD. In the event authorization is delayed, is there additional planning and engineering you could do in FY 1985? What funds would be required?

General BRATTON. Sir, all planning and engineering except preparation of plans and specifications for the first construction contract, which is necessary prior to construction, has been fully funded in FY 1984.

Chairman HATFIELD. If funds were appropriated for completion of plans and specifications in advance of project authorization, what funds would be required in FY 1985?

General BRATTON. Sir, we could effectively use \$2,000,000 to initiate plans and specifications.

MOUNT ST. HELENS

Chairman HATFIELD. What is the Army's position on cost-sharing a permanent solution to the sediment problems of Mt. St. Helens?

General BRATTON. Sir, no specific position on cost-sharing has been proposed. The feasibility report on permanent solutions will address this issue.

Chairman HATFIELD. What are the views of the Governors of Oregon and Washington regarding the recommendations before the President on Spirit Lake and sediment control?

General BRATTON. Sir, on Spirit Lake, the Governor of Washington prefers a tunnel to the west. The Governor of Oregon took no position. On sediment control, the Governors of Washington and Oregon favor a single retention structure.

Chairman HATFIELD. Has any federal agency publicly opposed the Army's recommendations? Specifically, what are the views of the U.S. Forest Service and U.S. Geological Survey on Spirit Lake and sediment control?

General BRATTON. Sir, the Forest Service prefers a tunnel to the west for Spirit Lake, but takes no firm position on sediment control. The USGS took no firm position on Spirit Lake and favored catching sediment in the Upper Toutle Valley. We know of no Federal agency opposition.

Chairman HATFIELD. The Department of the Army recommended to the President that the Corps continue flood protection to the communities along the Cowlitz River afforded during the last three years. How does this level compare to protection authorized by P.L. 98-63?

General BRATTON. Sir, in each of the last three years, we have been able to provide 100-year protection prior to winter flood seasons, and have maintained adequate protection for the communities by means of dredging during the winter season. Following storm events, we increase dredging activity to restore 100-year level protection. While it often is not possible to fully achieve 100-year protection between storms, we believe the level of protection provided by this procedure has been adequate.

Chairman HATFIELD. Does the Corps have adequate funding to maintain the authorized level of protection?

General BRATTON. Yes, sir, funding has been adequate to maintain the authorized 100-year level of protection through the major part of this winter.

Chairman HATFIELD. Why is this work not budgeted?

General BRATTON. Sir, P. L. 98-63 provided the authorization, but not the funds to maintain 100-year interim protection along the developed Cowlitz communities. Therefore, we have been responding to the funding requirements through use of jobs bill funds and other appropriate sources in response to the most critical needs. The Department of the Army does not believe it is appropriate to conduct work prior to determining the need and extent of measures required.

Chairman HATFIELD. What level of protection exists along the Cowlitz River now?

General BRATTON. Sir, all communities will soon approach 100-year protection. We expect this level can be maintained throughout the remainder of this water year, unless we have more sediment than can be expected under normal hydrologic conditions.

Chairman HATFIELD. Responding to the problems associated with Mt. St. Helens must be a drain on your Division and Portland District resources. How has this work impacted other important work in your region - especially timely completion of the Bonneville Navigation lock design?

General BRATTON. Sir, we have made the necessary adjustments and we are able to execute our program on time with available resources.

Chairman HATFIELD. If a decision were made now on the likely solution to the sediment problem, could you begin CP&E studies in FY 1984? If so, what work would be accomplished?

General BRATTON. Yes, sir, it would be possible to continue Planning and Engineering, assuming a general plan of development were identified now. Work would consist of planning and environmental studies, preliminary real estate, and engineering and design activities.

Chairman HATFIELD. If CP&E is accomplished in FY 1985, what funds would be required to complete this work during the FY?

General BRATTON. Sir, we currently estimate that \$7,380,000 will be required for all planning activities that can be accomplished prior to authorization. This would include \$6,600,000 for CP&E, \$200,000 for preliminary real estate activities and \$80,000 to complete the feasibility study.

Chairman HATFIELD. Could you start construction of a sediment solution in either FY 1984 or FY 1985? If so, what authority and funds do you need?

General BRATTON. Sir, assuming project authorization and funding for advance engineering and design studies, we could initiate work on access roads, cofferdam and diversion facilities in FY 1985. Authorization is required prior to acquiring real estate or initiating plans and specifications for the project. Plans and specifications would require \$1,427,000 and Real Estate acquisition an additional \$10,800,000.

COLUMBIA AND LOWER WILLAMETTE RIVERS, OR

Chairman HATFIELD. There has been a large increase in O&M funding for the Columbia and Lower Willamette project; a good share resulting from the Mt. St. Helens problem. How much of your budget is required for normal channel maintenance work and how much is attributable to Mt. St. Helens? Please explain for FY 1983-1985 and include cubic yards of infill resulting from Mt. St. Helens.

General BRATTON. Sir, the Mt. St. Helens work makes up a major part of the C&LW project budget. An exception was in 1983/1984 summer and fall season when we experienced abnormally increased shoaling after the freshet throughout the project area. I will supply the detailed data for the record.

(The information follows:)

COLUMBIA AND LOWER COLUMBIA RIVER, OR (dollars in thousands)

	FY 83		FY 84		FY 85	
	CY	\$	CY	\$	CY	\$
Regular Channel Maintenance	3,520.0	3,494.0	8,500.0	11,043.0	4,385.0	5,225.0
Mt. St. Helens Dredging	5,503.0	5,973.4	5,680.0	6,681.0	6,200.0	7,365.0
TOTAL	9,023.0	9,467.4	14,180.0	17,724.0	10,585.0	12,590.0

Chairman HATFIELD. Do you have a capability to do additional dredging on this project in FY 1985?

General BRATTON. Sir, we have no additional requirement based on our current estimate of FY 1985 dredging needs.

COLUMBIA RIVER AT THE MOUTH

Chairman HATFIELD. What is the status of the Columbia River at the Mouth construction project?

General BRATTON. Sir, the construction contract was advertised in mid-February 1984. Bid opening is scheduled for mid-March 1984.

Chairman HATFIELD. When do you anticipate the award of a contract?

General BRATTON. Sir, award of the contract is scheduled for early April 1984.

Chairman HATFIELD. How will this contract relate to this year's annual O&M dredging for this project?

General BRATTON. Sir, the contract will be for 6 million cubic yards, of which 4 million cubic yards is new work and 2 million cubic yards is normal O&M work. The ESSAYONS is scheduled to remove additional yardage as required.

Chairman HATFIELD. When do you expect to complete construction of this project?

General BRATTON. Sir, construction is scheduled for completion in October 1984.

COLUMBIA RIVER COAL EXPORT CHANNEL

Chairman HATFIELD. I note that the study completion schedule for the Columbia River Coal export channel has been extended from Nov 85 to Nov 86. What is the reason for this extension?

General BRATTON. Sir, the extension is necessary to re-do and conduct additional Waterways Experiment Station model tests which were previously inconclusive. The additional time is also needed to complete ongoing sequenced fish and wildlife studies and to evaluate other bulk commodity studies.

Chairman HATFIELD. I also note the study cost has been increased by \$453,000. Please explain.

General BRATTON. Sir, the increased cost is to fund additional model studies as well as environmental and commodity studies.

Chairman HATFIELD. Describe the development now proposed for Astoria and the prospective navigation improvements required. What commodities are being considered at this time?

General BRATTON. Sir, the port plans to upgrade their existing grain elevator facility which would increase the existing facilities capacity from 1.1 to 4 million bushels of corn and wheat. The coal export facility plan would require depths to accommodate conventional bulk carriers with drafts up to 55 feet. Commodities being considered at this time include construction products in support of the offshore oil industry, Powder River coal to be exported to Pacific Rim nations, and bulk grain exports.

Chairman HATFIELD. What is your FY 1985 capability and how would any additional funds be used?

General BRATTON. Sir, subject to our previously stated qualifications, the FY 1985 capability is \$600,000. The additional funds would be used to complete the study.

SIUSLAW RIVER AND BAR, OR

Chairman HATFIELD. Funds to initiate construction of the Siuslaw River and Bar project were provided in FY 1983. Please provide me with the current status of this project, including cost estimate and schedule for construction.

General BRATTON. Sir, the construction contract was awarded 29 July 1983. Last summer and fall, the contractor was mobilizing and opening the quarry. The primary contract work this winter is the production and stockpiling of rock material. On-site jetty construction is currently

scheduled to start in the latter part of March 1984 with completion in October 1986. The contractor intends to commence work simultaneously on the North and South jetties, although he is currently mobilizing only on the North jetty. The current estimated total appropriation requirement is \$30,400,000.

Chairman HATFIELD. What is the reason for the \$6,000,000 cost reduction in this project?

General BRATTON. Sir, the receipt of favorable bids for the project reduced the construction cost by \$4,400,000, while adjustments in the estimated inflation allowance through the construction period reduced the cost another \$1,600,000.

Chairman HATFIELD. What is the status of the contractor's work in the quarries?

General BRATTON. Sir, the contractor is successfully developing the Mapleton quarry. As of early January, there were approximately 60 stones separated as suitable for the jetty, many larger than that required for select A Stone. Probing of another quarry, Chickahominy, has been performed, but the contractor plans to develop this quarry only if needed.

Chairman HATFIELD. Do you expect to complete this project on schedule by October 1986?

General BRATTON. Yes, sir. October 1986 is the current completion date for all work on this project.

UMPQUA RIVER AND BAR, OR

Chairman HATFIELD. Has the Umpqua River entrance training jetty proven to be as beneficial for reducing dredging as originally planned?

General BRATTON. Yes, sir,. The channel has been in better condition because of the self maintenance capabilities of the extended training jetty. We have significantly reduced our annual dredging requirements.

Chairman HATFIELD. With the amount budgeted for FY 1985, can you provide project dimensions?

General BRATTON. Sir, we feel the funding request for FY 1985 will be adequate for this purpose.

UMPQUA RIVER BASIN, OR

Chairman HATFIELD. I note that this study has not been funded since FY 1971 when an interim report on the South Umpqua was completed. What were the results of those studies?

General BRATTON. Sir, earlier work resulted in an Interim Report on the South Umpqua River published in 1972. That report contained a recommendation to construct Days Creek Lake, a large storage reservoir on the South Umpqua River. Phase I studies of the Days Creek project were placed in a deferred category in December 1979 because the project was not economically viable.

Chairman HATFIELD. Why are you resuming the study at this time?

General BRATTON. Sir, the study is being resumed in response to local requests for Corps assistance in re-examining the water resource development needs of the Umpqua River Basin.

Chairman HATFIELD. What will you accomplish with the funds requested for FY 1985?

General BRATTON. Sir, funds will be used for study coordination with Douglas County, and to identify and obtain additional reconnaissance level information. Other work would include evaluating each of approximately two dozen damsites. Remaining activities would consist of screening these sites

to a number which would merit further detailed studies, developing a plan to accomplish those studies, and preparing a reconnaissance report presenting findings and recommendations for further detailed studies.

Chairman HATFIELD. Days Creek project was deferred in 1979 for lack of economic feasibility. What has changed to make this or alternatives worthy of restudy?

General BRATTON. Sir, since deferral of the Days Creek project, Douglas County has funded several studies by private consultants to obtain information on specific damsites and to develop a water resource management program. As a result of those studies, the county is actively pursuing construction of Galesville Dam on a tributary of the South Umpqua River. The county recognizes that other damsites would be needed in order to satisfy unmet water resources needs.

COOS BAY, OR

Chairman HATFIELD. A new study resolution was recently adopted by the Senate authorizing the Coos Bay deep-draft navigation study. Why isn't this study in the President's FY 1985 budget?

General BRATTON. Sir, since the study resolution was not adopted until 2 November 1983, it was not available for consideration for inclusion in the FY 1985 budget report.

Chairman HATFIELD. What is the purpose of this study?

General BRATTON. Sir, the study will evaluate the deepening and widening of the current navigation channel as well as replacing the Southern Pacific Bridge with a wider span, widening the turning basins and providing boat anchorages.

Chairman HATFIELD. How long will it take to complete the study and how much will it cost?

General BRATTON. Sir, the reconnaissance phase of the study will require 12 months to complete and cost an estimated \$240,000.

Chairman HATFIELD. What is your FY 1985 capability and how would these funds be used?

General BRATTON. Sir, subject to the previously stated qualifications, our FY 1985 capability is \$240,000 to initiate and complete a reconnaissance study.

CHARLESTON SMALL BOAT HARBOR, OR, SECTION 107 PROJECT

Chairman HATFIELD. What is the status of construction of the Section 107 project at Charleston, OR?

General BRATTON. Sir, construction is about 80% complete.

Chairman HATFIELD. When do you expect completion?

General BRATTON. Sir, we expect completion by 10 April 1984.

COQUILLE RIVER

Chairman HATFIELD. What has been your success in maintaining the authorized dimensions for the Coquille River Navigation Channel during the past year?

General BRATTON. Sir, the dredge YAQUINA worked on the Coquille River Navigation project for nine days during the period 28 May through 16 June 1983. During that time, approximately 29,000 cubic yards of material was removed, which provided close to project dimensions. Because of a lack of projected commercial traffic, the Port Manager then advised that additional

dredging in 1983 would not be required. Accordingly, the dredge YAQUINA was used at other projects for the remainder of the dredging season.

Chairman HATFIELD. When do you expect to complete the report? Will you be able to complete the study with available funds?

General BRATTON. Sir, we expect to complete the survey report in November 1984 with available funds.

PORT ORFORD, OR

Chairman HATFIELD. Additional Operation and Maintenance funds were provided for the Port Orford project in FY 1984. How were these funds utilized?

General BRATTON. Sir, along with the port, we have developed a wintertime maintenance facility and will test it during FY 1984. This plan will utilize a small dredge pump and suction device mounted on a skid and suspended from the existing facilities. This activity will be carried on during the night, non-fishing hours, on an as-needed-basis.

Chairman HATFIELD. Do you expect to continue this program in the future?

General BRATTON. Sir, if the test proves successful, we will continue this program to provide the minimum degree of usability for this boat facility during the winter period.

Chairman HATFIELD. Do you have adequate funds to maintain this project in FY 1985? If not, what is your FY 1985 capability?

General BRATTON. Sir, the budget amount includes \$162,000 for channel flushing vital to summertime operation and usage of the facility by commercial fishing interests. Subject to the previously stated qualifications, we have an additional capability of \$178,000 for channel flushing.

ROQUE RIVER AT GOLD BEACH

Chairman HATFIELD. Last year, you indicated you were going to construct an L-shaped timber pile groin in the entrance to Rogue River, which would be effective in stabilizing the shoals along the south jetty. This was to be a test structure to be built during this past summer using O&M funds. What is the status of this effort and have you determined any data from the results to date?

General BRATTON. Sir, the concept of an L-shaped timber pile groin was changed during the final design process, to a three timber-pile groins perpendicular to the South Jetty. A contract was awarded for construction on 19 August 1983. Construction was not completed in calendar year 1983, because of the fall and winter storm season. Construction will resume this year as soon as weather conditions permit about mid-May. Work would be completed in 60 days. No data on results have been collected to date.

Chairman HATFIELD. What is the status of the model studies for alternative modifications to the river entrance? What are the results to date of these tests?

General BRATTON. Sir, a total of 61 model tests have been conducted. Those tests have identified a number of jetty modifications, which are receiving closer scrutiny.

Chairman HATFIELD. What is the status of the engineering study to find a solution to the entrance bar problem?

General BRATTON. Sir, we expect to complete the study in May of this year.

Chairman HATFIELD. Please provide an outline on your total dredging program for this project.

General BRATTON. Sir, hopper dredging during FY 1984 should provide maintenance of an adequate depth over the entrance bar. Pipeline dredging provides for maintenance of the entrance to the small boat basin immediately upstream of the South Jetty. Channel flushing assists the hopper dredge by providing adequate depths for the dredge to approach the project during the summer dredging season and also provides some channel maintenance in the exposed portion of the boat basin entrance.

GRAYS HARBOR, WA

Chairman HATFIELD. Senate Report No. 98-275 on the Supplemental Appropriations Bill, 1984, contains language which expresses concern over the continued delays in processing the Grays Harbor survey ~~this~~ report to the Congress. What is the status of the Washington-level review of the survey report on this project?

General BRATTON. Sir, the survey report on navigation improvements at Grays Harbor was approved by the Board of Engineers in January 1983. The final Chief of Engineer's Report is being prepared for submittal to the Secretary of the Army and Congress. Additional supporting data from the field has been requested, including the economic impact of cost recovery, which is now being prepared.

Chairman HATFIELD. Congress appropriated \$500,000 for Continuation of Planning and Engineering studies on this project in FY 1984. What is being accomplished with these funds?

General BRATTON. Sir, the \$500,000 identified in the Conference Report on the FY 1984 Bill was reduced by \$200,000 for savings and slippage. With the remaining \$300,000, studies are being scoped, environmental impact and General Design Memorandum studies will be initiated, and preparations for awarding major design and environmental contracts will be made.

Chairman HATFIELD. What is the current status of local interest in this project?

General BRATTON. Sir, the Port of Grays Harbor continues to actively support the project.

Chairman HATFIELD. Could you use funds to continue CP&E studies in FY 1985 and, if so, describe the work which would be accomplished?

General BRATTON. Yes, sir, funds could be used in FY 1985 for Continuation of Planning and Engineering studies. The following work could be conducted: dredging and disposal GDM studies, including ocean disposal site designation studies; environmental impact studies; and railroad bridge replacement design and cost studies.

OREGON COAST DREDGING PROGRAM

Chairman HATFIELD. Do you have sufficient funds in the O&M budget request to maintain the Oregon coastal ports to project dimensions?

General BRATTON. Yes, sir, sufficient funds are programmed in FY 1985 to accomplish maintenance dredging at all coastal projects except Port Orford. At Port Orford, as I previously stated, we have an additional capability of \$178,000 to accomplish additional dredging.

Chairman HATFIELD. Could you give me figures on your dredging backlog on the Oregon coastal projects?

General BRATTON. Sir, we are pleased to report that, at the present time, there is no backlog of dredging at any of the Oregon Coastal Projects.

Chairman HATFIELD. In the past, the Corps has indicated that they were limited by plant capability and the lack of hopper dredges. Do you still have that problem?

General BRATTON. Sir, at the present, all hopper dredging within the North Pacific Division is being accomplished by a combination of government and contract plant. We are fortunate to have two of the Corps of Engineers' new hopper dredges, the YAQUINA and the ESSAYONS located in the Pacific Northwest. The YAQUINA, which replaced the dredge PACIFIC, has demonstrated a production capability 40% greater than the PACIFIC's. The ESSAYONS, the Corps of Engineers' newest dredge, replaced both the dredge HARDING and the dredge BIDDLE. The dredge ESSAYONS, which has just now started her second dredging season, has already shown a production rate 25% higher than the BIDDLE's. We expect that production rate to increase above that amount as we gain experience with the dredge. At the present time, our dredging capability is supplemented by three contract hopper dredges, two medium class dredges and one small class dredge. Although we would prefer more competition, especially with regard to the small class dredge, we are confident that we presently have the equipment capability on the West Coast to accomplish all required maintenance dredging.

Chairman HATFIELD. What are you projecting in FY 1985 as far as the number of working days for the YAQUINA on Oregon coastal projects for the dredge ESSAYONS? How does this schedule compare with the FY 1984 hopper dredging program?

General BRATTON. Sir, I will provide that information for the record.

(The information follows:)

The following chart shows the number of days presently scheduled for both the dredge YAQUINA and dredge ESSAYONS on Oregon Coastal projects for FY 1984 and FY 1985.

<u>Project</u>	<u>FY 1984 Number of Days</u>	<u>FY 1985 Number of Days</u>
Dredge YAQUINA		
Small Oregon Coast Projects	138	138
Dredge ESSAYONS		
Yaquina Bay and Harbor	0	8
Coos Bay	0	20

Chairman HATFIELD. How is the new west coast hopper dredge ESSAYONS performing?

General BRATTON. Sir, the dredge ESSAYONS, which is the Corps of Engineers' newest dredge, has been assigned to North Pacific Division for work on the West Coast. To date, the dredge has performed exceptionally well and has out-produced the dredge BIDDLE by more than 25%. We are confident that the ESSAYONS will continue to improve its production rate.

Chairman HATFIELD. What are you projecting as the number of working days on west coast projects? Do you have sufficient funds? If additional funds were provided, could you extend this schedule?

General BRATTON. Sir, I will provide that information for the record.

(The information follows:)

The following chart shows the schedule for the dredges YAQUINA and ESSAYONS in FY 1985. We presently have sufficient funds to accomplish this work and have no additional capability for more work by government-owned hopper dredges.

FY 1985

<u>Project</u>	<u>ESSAYONS</u>	<u>YAQUINA</u>
	<u>Number of Days</u>	<u>Number of Days</u>
Small Oregon Coastal Projects	-	138
Columbia River Estuary Projects	-	27
Vancouver to The Dalles	-	10
Humboldt Harbor	-	30
Yaquina Bay and Harbor	8	-
Mouth Columbia River	91	-
Columbia and Lower Willamette Rivers	53	-
Coos Bay	20	-
San Francisco Bay Bar	47	-

SECTION 107 PROJECTS

Chairman HATFIELD. What is the status of construction of the Section 107 project at Government Island, South Shore?

General BRATTON. Sir, the project is complete and functioning.

Chairman HATFIELD. Please describe the Siuslaw River Small Boat Basin Section 107 study. What is the current status of local interest in this project?

General BRATTON. Sir, we expect to complete the DPR in FY 1985 if local interests are ready to sponsor.

Chairman HATFIELD. When will you complete construction of the 107 project at Winchester Bay, OR?

General BRATTON. Sir, this project has been completed.

Chairman HATFIELD. What is the status of the Ilwaco, WA Section 107 project? Do you have a capability to initiate construction of this project in FY 1985?

General BRATTON. Sir, we will complete the DPR in FY 1984. Funds in the amount of \$60,000 would be required in FY 1985 for plans, specifications and construction.

Chairman HATFIELD. What are you studying under the Section 107 authority at Skamokawa, WA? What is your capability for this project in FY 1985?

General BRATTON. Sir, there is a problem of access to existing moorage and service caused by sedimentation in the existing channels. Funds in the amount of \$60,000 would be required in FY 1985 for plans, specifications and construction.

Chairman HATFIELD. Briefly describe the problems that have led to delaying the Wind River, WA Section 107 study?

General BRATTON. Sir, a suitable site for disposal of dredged material has caused a delay in the study completion. As soon as this local responsibility item can be resolved, a new completion schedule will be developed.

WILLAMETTE RIVER BASIN BANK PROTECTION, OR

Chairman HATFIELD. The Senate Committee Report 98-275, accompanying the Supplemental Appropriations Bill for FY 1984, contained language directing the Corps of Engineers to allocate from available funds \$1,000,000 to undertake measures which will prevent further erosion to and protect Federal investment in the Minto-Brown Island Park in Oregon. Please briefly discuss this problem and what you would propose to do to remedy the situation.

General BRATTON. Sir, approximately 4,000 linear feet of river frontage at Minto-Brown Island Park is experiencing active bank erosion. During the past two years, the erosion has accelerated bank recession by as much as 28 feet per year over some of the park's downstream portion. Over 2 acres of park land has been lost in this time period. A riprap revetment, approximately 7,500 feet in length, is required to protect the park from erosion.

Chairman HATFIELD. What is the economic feasibility of doing this work as an element of Willamette River Basin Bank protection project?

General BRATTON. Sir, the North Pacific Division Engineer has advised me informally that this increment of work is incrementally justified.

Chairman HATFIELD. If funds were available, when could you construct this project? What funds are required?

General BRATTON. Sir, from an engineering perspective, we anticipate the Minto-Brown Island project could be initiated this year and completed during the summer of 1985. Total cost of the work is \$1,690,000.

SNETTISHAM, AK

Chairman HATFIELD. What is the status of the Snettisham hydropower project in Alaska?

General BRATTON. Sir, the Snettisham project was authorized and designed as a staged project to meet the long range power needs of the area. The first or Long Lake stage has been in operation since October of 1975. The Long Lake stage of the project has two generators, each with a rated capacity of 23,580 kW. The Crater Lake stage will add another unit rated at 27,000 kW of capacity and will provide 106,000 MWh of firm energy to the system. The existing powerplant was designed to accommodate the Crater Lake generator. The existing transmission line is capable of carrying the additional power from the addition of the Crater Lake unit. We are continuing engineering and design activities in FY 1984, and are preparing plans and specifications for initiation of construction of the power tunnel and procurement of powerhouse equipment. We expect to award contracts for camp facilities, tunnel excavation and a haul road this summer.

ELK CREEK LAKE, OR

Chairman HATFIELD. Please discuss the status of the Elk Creek Lake dam, including any recent indication of support by local interests.

General BRATTON. Sir, construction of the Elk Creek Lake, Oregon project was initiated in February 1971. Work completed to date includes construction of a bypass road and stockpiling of gravels for use in the main dam and relocated roads. All lands for the project have been acquired. The project Environmental Impact Statement was filed with Council on Environmental Quality on 17 September 1971. Supplement No. 1, addressing water quality and social/demographic information was filed with EPA on 24 December 1980. On 11 October 1983, an environmental assessment was completed, addressing the design changes which incorporate roller compacted concrete in lieu of the previous embankment dam concept. A record of decision was filed with EPA in February 1982. Engineering and design studies are essentially complete. The project does not possess the margin of economic merit which typifies Corps projects; nonetheless, it is supported by the Oregon State Water Policy Review Board and the Governor of Oregon.

Chairman HATFIELD. If you were directed to resume construction in FY 1985, what funds would be required?

General BRATTON. Sir, we could effectively utilize \$18,000,000 to resume construction by awarding the main dam contract.

Chairman HATFIELD. The incomplete road relocation at this project, the result of prior work, are reported to be causing problems for the county. What funds would be required to complete the relocation in accordance with project requirements?

General BRATTON. Sir, \$11,600,000 would be required to complete project roads.

Chairman HATFIELD. Have there been any recent floods in the Rogue River Basin?

General BRATTON. Yes sir, flood stages were exceeded at several locations along the Rogue River during 1982 and 1983.

Chairman HATFIELD. If so, what were the damages and what would have been the damage reduction if the Elk Creek dam had been functioning at that time as an integral part of the Rogue River project?

General BRATTON. Estimated damages incurred during 1982 were \$2.6 million, and in 1983, \$2.4 million. Of these, \$685,000 and \$609,000, respectively, would have prevented by Elk Creek project alone.

BONNEVILLE POWER UNITS, OR & WA

Chairman HATFIELD. Please bring me up to date on the status of the Bonneville Power Units project?

General BRATTON. Sir, our December 1980 design report recommended modification of the Station Service Unit, upgrading Main Units 1 and 2 and construction of 3 new small hydropower units to take advantage of energy from fish attraction water upgrading. Work on existing Units 1 and 2 and modification of the Station Service Unit were subsequently transferred to the O&M-funded Major Repair and Modernization Program. The 3 new small hydro units, using fish attraction flows, remain as a part of this project.

Chairman HATFIELD. Have you had any recent contacts with a local sponsor?

General BRATTON. Yes, sir, the Public Utility District of Skamania County, Washington, and City of Cascade Locks, Oregon, have expressed their willingness to consider further the possibility of entering into an agreement to finance the construction of the project. In addition, the Northern Wasco County People's Utility District, Oregon, recently expressed interest in the project and provided a position paper outlining issues in need of resolving prior to entering a sponsorship agreement.

Chairman HATFIELD. What were the results of those communications?

General BRATTON. Sir, pending resolutions of marketing procedures, further activity on innovative financing agreements have been delayed.

Chairman HATFIELD. What is the status of the FERC license application for this project?

General BRATTON. Sir, the City of Cascade Locks, Oregon, and PUD #1 of Skamania County, Washington, filed a preliminary permit application for Bonneville Lock and Dam fish attraction power units project with FERC, 14 November 1983.

JOHN DAY POWERHOUSE MAJOR REHABILITATION

Chairman HATFIELD. This project is recommended as a new start in FY 1985. What is the urgency for doing this work?

General BRATTON. Sir, the urgency is to prevent a continuous decline of unit availability resulting in an annual power loss of approximately \$900,000.

Chairman HATFIELD. How do you propose to use the \$6,000,000 programmed for this project in FY 1985?

General BRATTON. Sir, the \$6,000,000 programmed for FY 1985 will be used to repair turbines, rewind and refurbish generators, improve control systems, as well as improve the station service and the generator breakers.

Chairman HATFIELD. How do you propose to schedule the unit outages at this project as the rehabilitation proceeds?

General BRATTON. Sir, the unit outages are scheduled so that at any one time no more than three units will be out of service concurrently for rehabilitation, preventive maintenance, and/or downstream fingerling system work. The units will be selected depending upon condition of the equipment and its maintenance history. Every attempt will be made to perform multi-tasks during one outage.

Chairman HATFIELD. When do you expect to complete this work?

General BRATTON. Sir, this work is scheduled for completion in September 1989.

JOHN DAY LOCK AND DAM, OR & WA

Chairman HATFIELD. Last year, you reported to Congress a delay in this project's completion date from September 1986 to April 1989. I note this year you are able to report a completion date of April 1987. Please explain how the schedule was partially regained.

General BRATTON. Sir, the funds provided for FY 1984 and savings from favorable bids allowed us to advance work into FY 1984 and advance completion by two years.

Chairman HATFIELD. I also note that you are reporting a cost reduction of \$7,000,000 in this project. You indicate that a portion of that is due to \$1,736,000 reduction for fish and wildlife facilities due to favorable bids in current year contract. Would you please describe those favorable bids?

General BRATTON. Sir, favorable bids were received on Phase I contracts for the Submersible Traveling Screens and the Transportation Conduit. These contracts will complete 9 of 16 units at the project by mid-FY 1985.

Chairman HATFIELD. You indicate a need for \$5,700,000 in FY 1985. Do you have a capability above that amount for FY 1985, and if so, what would you use it for? Would project completion be advanced?

General BRATTON. Sir, subject to the previously stated qualifications, our FY 1985 capability is \$12,600,000. It would advance the second phase of the submersible traveling screens and conduit construction and advance the screen maintenance facilities, and would permit project completion one year earlier, in April, 1986.

POWERHOUSE REPAIR AND MODERNIZATION PROGRAM

Chairman HATFIELD. Please bring me up to date on the powerhouse repair and modernization progress at the Bonneville, John Day and McNary projects.

General BRATTON. Sir, for the Bonneville Lock and Dam project 32 percent or \$2,655,000 of total estimated cost of \$8,249,000 will be obligated by end of FY 1984. This program will be completed in FY 1986

For the John Day repair and modernization, 18 percent or \$6,727,000 of total estimated cost of \$39,027,000 (including major rehabilitation) will be obligated by the end of FY 1984. This work is scheduled for completion by FY 1989.

For the McNary Lock and Dam repair and modernization program 59 percent or \$10,861,000 of the total estimated cost of \$18,361,000 will be obligated by the end of FY 1984. This work is scheduled for completion in FY 1986.

Chairman HATFIELD. What additional funds in FY 1985 could you use to advance this important program?

General BRATTON. Sir, subject to the previously stated qualifications, our additional capability for Bonneville is \$900,000, John Day is \$770,000, and McNary is \$600,000.

M McNARY LOCK AND DAM, 2ND POWERHOUSE, OR & WA

Chairman HATFIELD. What is the urgency for constructing the McNary 2nd Powerhouse project?

General BRATTON. Sir, several issues need to be considered when deciding about the phasing of McNary construction. One of these is the uncertainty of forecasting future resource requirements. In this period when there has been abundant water supply and reduced economic activities, there is certainly adequate power production capability; however, in the recent past, the situation was vastly different and brownouts were being predicted. Another consideration is the fact that even under the most optimistic conditions, McNary Second Powerhouse cannot begin production until late 1990. It must also be recognized that McNary is part of an integrated system and has the least hydraulic capacity of any plant on the lower Columbia so it could hamper operational flexibility of the Federal system. Certainly it appears prudent to at least complete planning and engineering to be in the best position to proceed with project construction and afford resource flexibility in line with the Power Planning Council's option concept.

Chairman HATFIELD. You are nearing completion of your planning and engineering for this project. In the event the project is not authorized for construction this year, is there additional work you could do? If so what are your requirements?

General BRATTON. Sir, all planning and engineering, except preparation of plans and specifications for the first construction contract that is necessary prior to construction, has been fully funded in FY 1984.

LOWER SNAKE FISH AND WILDLIFE COMPENSATION, OR , WA, ID

Chairman HATFIELD. What is the status of design and construction of the fish hatcheries you are constructing under the Lower Snake River Fish and Wildlife project?

General BRATTON. Sir, we are experiencing excellent progress on the program. Three hatcheries are now complete and in operation. Two additional hatcheries will be completed this year. Three will be placed under construction and design of the last hatchery will be completed in FY 1985.

Chairman HATFIELD. The Justification Sheet indicates an unscheduled balance to complete after FY 1985 of \$18,447,000. This is the first time that there has been an unscheduled balance on this project. Please explain what this is for.

General BRATTON. Sir, the unscheduled balance to complete after FY 1985 of \$18,447,000, includes Lands and Damages, \$15,708,000 and Wildlife Compensation Facilities, \$2,739,000. From 1978 to 1984, efforts to acquire fee and easement lands for wildlife compensation and fisherman access were only marginally successful. Washington State Department of Game personnel have located potential willing sellers for portions of land for upland game bird hunting and steelhead fishing. Easements for fisherman access were approved for purchase on four parcels on Asotin Creek, while appraisals indicate that landowners are requiring easement prices exceeding those established by the appraisals. Thus, it still appears that little land will be possible to be acquired under the upland game bird hunting portion of the Compensation Plan under current criteria.

Chairman HATFIELD. Last year's Justification Sheet indicated lands and damages would be complete in Sep 88. Now they are indefinite. Is this related to the unscheduled balance to complete? *

General BRATTON. Yes, sir. Until the issues of land acquisition are resolved, land acquisitions scheduled after FY 1985 have been placed in the unscheduled balance to complete.

Chairman HATFIELD. Would you describe last year's adult fish return to the Snake River system and how it compares to prior years. Also, what is the outlook for 1984?

General BRATTON. Yes, sir. In 1983, adult steelhead returning to the Snake River totaled 88,800 and was the highest recorded since 1962. A decrease in adult salmon runs continued with only 20,000 counted as compared with the average of 36,000 for the previous ten years. The forecast for steelhead in 1984 again appears good, but the salmon outlook continues to reflect the depressed condition of Snake River stocks.

BLAIR AND SITCUM WATERWAYS, WA

Chairman HATFIELD. I note that continuing planning and engineering is not funded for the Blair-Sitcum project in FY 1985? Do you have a requirement?

General BRATTON. Sir, subject to the previously stated qualifications, our FY 1985 capability for Blair and Sitcum Waterways, Washington, is \$326,000.

WATER RESOURCES BENEFITS

Chairman HATFIELD. Provide for the record an update of the economic benefits generated by Corps projects nationwide.

General BRATTON. Yes, sir.
(The information follows:)

TABULATION OF CORPS OF ENGINEERS PROJECT BENEFITS

The only cumulative record the Corps keeps of total benefits and cost allocations to a project purpose is flood control. Remaining costs are not segregated by project purpose. However, the following tabulation does provide quantitative benefits provided by completed projects in our investment program.

Flood control (billions:)	
Flood damages prevented through Fiscal Year 1983.....	129.0
Expenditures for flood control facilities..... ^{1/}	13.4
Navigation (million tons:)-1982	
Coast harbors and channels.....	1,080.4
Great Lakes harbors and channels.....	122.5
Inland and intracoastal waterways.....	573.8
Total.....	1,776.7
Water supply: Gallons of water supply storage (billions:)	2,490.0
Water quality control: Storage capacity (million acre-feet:)	2.3
Power:	
Installed capacity (million Kilowatts:)	19.4
Net generation (billion kilowatt-hours-1983).....	88.2
Revenues (millions of dollars through fiscal year 1982).....	3,672.0
Recreation: Recreation-days (millions).....	464.0

^{1/}Represents total initial investment cost for flood control, including the amount allocated to flood control in multipurpose power projects and the amount allocated to flood control in the Mississippi River and tributaries program.

FLOOD DAMAGES PREVENTED

(in billions of dollars)

<u>Fiscal Year</u>	<u>Recorded</u>
1974	13.0
1975	15.9
1976	1.7
1977	2.6
1978	6.3
1979	19.4
1980	7.3
1981	1.2
1982	4.3
1983	23.2
10-Year (1974-1983) Total	94.9
10-Year (1974-1983) Annual Average	9.5

HOW FLOOD DAMAGES PREVENTED ARE DETERMINED

Basically, flood damage estimates represent the difference in flood damages with and without the project. In the case of a flood control levee, the computation is done by projecting the river level over the land without the levee in place. In the project design stage, flood damage curves had been developed for representative zones along the length of the river banks protected by the project. The flood damage curves relate water surface levels to dollar damages incurred which are derived from historical flood loss records and field surveys of the flooded areas. In the example of the flood control levee, one can readily visualize the devastation that would result during severe flooding without the levee, by observing water levels on both sides of the structure. The flood damages prevented by a reservoir project are not as obvious. Reservoir operation involves retaining volumes of water behind the dam until the flood threat to the downstream area eases. Then releases from the reservoir are made at a gradual rate, when stream flows are below flood stages. The flood damages prevented by the reservoir are computed by comparing the damages that would have been incurred with and without the reservoir being in operation. All damage estimates at the end of each respective year are not adjusted for subsequent inflation. The Corps of Engineers does not include in its damage computation any quantitative value for human lives lost or injuries sustained during the floods. Statistics on loss of human life are reported separately.

WATER SUPPLY

The Corps of Engineers does not sell water; it can only provide storage space for use by state and local interests. Therefore, only the storage space we have under contract can be listed. Corps records are quite detailed for municipal and industrial storage, but very little information is available on irrigation and water quality. This is because contracts are signed for municipal and industrial use. The storage space for irrigation is turned over to the Department of Interior for administration, and the Corps has only a minor role in water quality storage since the enactment of Public Law 92-500. Therefore, with this modification to the request, the information is provided below.

(The information follows:)

WATER SUPPLY STORAGE

1. Water storage space under contract for Municipal and Industrial Uses.

<u>Fiscal Year</u>	<u>Storage (acre-feet)</u>	<u>Water Stored (trillion gallons)</u>
1974	5,309,000	1.73
1975	5,631,000	1.83
1976	5,765,600	1.88
1977	6,015,100	1.96
1978	6,167,200	2.01
1979	6,267,400	2.04
1980	7,398,200	2.41
1981	7,572,000	2.47
1982	7,648,500	2.49
1983	7,795,400	2.52

At the end of Fiscal Year 1983, there was 8,886,000 acre-feet of Municipal and Industrial storage space in 111 Corps reservoir projects, 101 of which are operational. Of that total storage space 7,795,400 acre-feet (88%) is under contract in 168 separate agreements. The total storage space in Corps reservoir projects for M&I water supply represents an investment cost of \$1.132 billion, of which \$990 million (88%) is under contract.

2. Water Storage Space Provided For Irrigation.

<u>Fiscal Year</u>	<u>Status</u>	<u>No. of Projects</u>	<u>Specific</u>	<u>Joint Use</u>
1983	Under Constr.	4	200,000	16,400,000
	Completed	48	2,473,000	52,655,000

3. Water Storage Space Provided For Water Quality

<u>Fiscal Year</u>	<u>Storage (Acre-feet)</u>
1983	2,300,000 ^{1/}

^{1/} Approximately.

TRANSPORTATION OF GOODS

TOTAL COMMERCE
(In millions)

	<u>Totals</u>	<u>Coastal harbors and Channels</u>	<u>Great Lakes</u>	<u>Inland and Intracoastal</u>
<u>Tons:</u>				
1982.....	1,777	1,083	123	571
1981.....	1,941	1,148	179	614
1980.....	1,999	1,194	176	629
1979.....	2,072	1,227	218	627
1978.....	2,018	1,180	214	624
1977.....	1,904	1,114	178	612
1976.....	1,832	1,027	197	608
1975.....	1,692	924	186	582
1974.....	1,743	947	197	599
1973.....	1,757	937	224	596
<u>Ton Miles</u>				
1982.....	967,900	687,000	62,800	218,100
1981.....	1,023,600	693,700	97,400	232,500
1980.....	1,016,100	691,700	95,400	229,000
1979.....	931,900	592,200	121,700	218,000
1978.....	928,000	599,000	118,000	211,000
1977.....	692,000	399,000	90,000	203,000
1976.....	677,000	374,000	105,000	198,000
1975.....	639,000	360,000	98,000	181,000
1974.....	656,000	367,000	105,000	184,000
1973.....	666,000	368,000	125,000	173,000

PRINCIPAL COMMODITIES IN WATERBORNE COMMERCE - 1973-1982
(In percent)

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973
Petroleum & products	44.1	42.6	44.3	46.5	48.7	49.1	45.3	43.6	42.1	43.0
Coal & coke	15.7	15.4	13.6	11.9	10.0	12.3	12.5	13.8	13.1	12.0
Iron ore, iron & steel	4.7	7.2	6.7	7.8	7.8	6.6	8.5	8.9	9.8	9.7
Sand gravel & stone	4.2	4.5	5.0	5.5	5.8	5.4	5.9	6.5	7.3	7.6
Grains	9.2	8.9	8.3	7.3	6.9	6.2	6.9	6.6	5.6	6.5
Logs & lumber	2.4	2.2	2.6	2.7	2.6	2.8	2.9	2.9	3.0	2.9
Chemicals	5.2	5.4	5.8	5.5	5.1	5.3	5.4	5.1	5.5	5.3
Seashells	0.4	0.4	0.5	0.4	0.5	0.6	0.7	0.9	1.0	1.1
All other commodities	14.1	13.4	13.2	12.4	12.6	11.7	11.9	11.7	12.6	11.9

RECREATION

Recreation Visitor Days from 1974-1983
(In millions of recreation days of use)

Calendar year:	
1974	352
1975	376
1976	391
1977	424
1978	439
1979	449
1980	457
1981	468
1982	480
1983	479

STATUS OF EMERGENCY FUND

Chairman HATFIELD. Would you provide for the record the current status of the Emergency Fund for the remainder of 1984 and your possible requirements for 1985.

General BRATTON. Mr. Chairman, the current status of the Emergency Fund as of February 29, 1984 is as follows:

	\$ Million
Balance as of October 1, 1983	\$ 43.10
FY 1984 Appropriation	10.00
Revocations (October 1, 1983 - February 29, 1984)	<u>4.53</u>
SUB-TOTAL	\$ 57.63
Allocations	
FY 84 Disaster Preparedness Program	\$ 7.34
Emergency Operations	4.66
Rehabilitations	10.20
Advance Measures	<u>7.03</u>
SUB-TOTAL	\$ 29.23
Balance as of February 29, 1984	\$ 28.40
Projected Requirements in FY 84	
Reimbursement for Emergency Operations	\$ 1.19
Rehabilitations/Advance Measures (being processed)	2.81
Spirit Lake Permanent Solution	12.00
Identified Potential Rehabilitation/ Advance Measures	<u>4.97</u>
SUB-TOTAL	\$ 20.97
Available to Meet Unidentified Emergencies	\$ 7.43

The currently projected FCCE funding requirements for the remainder of FY 1984 are about \$21.0 million, which would leave \$7.4 million to meet unidentified emergency operations and recovery requirements over the remainder of the year. The requirements resulting from the spring flood season are unknown at this time and could vary significantly, depending on the severity, frequency, and duration of the disaster events. Should severe flooding develop, funds can be reprogrammed from other flood control appropriations to meet the immediate needs until total requirements are identified and supplemental funding can be requested. Of the projected requirements, the \$12 million identified for Spirit Lake permanent solution will initiate construction; however, no funds have been provided in the FY 1985 budget to complete the Spirit Lake project (\$5.7 million).

HOPPER DREDGE BID EXPERIENCE

Chairman HATFIELD. Provide a tabulation similar to that provided last year which shows the Corps bid experience on hopper dredge work.

General BRATTON. Yes, we can provide that.

CORPS OF ENGINEERS HOPPER DREDGE BID OPENINGS

PROJECT		CU YD MAINT	LOW BID	GOVERNMENT ESTIMATE	NO. BIDS	%
FY 1983						
BRAZOS ISLAND HBR	TX	853,000	1,797,160	1,854,580	2	97%
BRUNSWICK HBR.	GA	563,900	1,847,642	1,953,047	1	95%
CALCASIEU RVR	LA	4,200,000	3,564,347	2,929,739	2	122%
CHRISTI SHP CHNL	TX	2,170,000	3,974,900	4,250,300	7	94%
COLUMBIA RVR	OR	1,900,000	2,389,500	2,898,074	2	82%
DELAWARE RVR	PA	450,000	685,000	1,355,670	3	51%
FREEPORT HBR.	TX	1,095,000	1,863,200	1,873,000	3	99%
GRAYS HARBOR	WA	1,370,000	2,097,500	2,051,250	2	102%
HUMBOLT HARBOR & BAY	CA	825,000	1,706,250	1,181,760	2	144%
HURON HBR.	OH	67,000	282,800	396,930	6	71%
MANSFIELD	TX	414,000	1,095,200	871,974	2	126%
LORAIN HARBOR	OH	150,000	698,750	789,750	4	88%
MANTED SHALLOWEAG BAY	NC	237,000	546,280	531,743	3	103%
MATAGORDA SHP CHNL	TX	4,148,000	1,633,572	2,319,960	6	70%
MISS RV GULF OUTLET	LA	5,650,000	5,488,000	4,573,500	5	120%
MISS RV PASSES, SW PASS	LA	6,500,000	5,527,000	5,839,150	5	95%
MISS RV, BR-GULF, SW PASS	LA	450,000	975,950	976,115	2	100%
MISS RV, BR-GULF, SW PASS	LA	1,100,000	2,396,500	2,073,818	2	116%
MISS RV-GULF OUTLET	LA	2,790,000	1,262,070	1,427,620	5	88%
MOBILE & PASCAGOULA	MS	2,750,000	1,720,013	1,428,513	2	120%
MOREHEAD CITY	NC	640,000	1,953,000	1,727,400	1	113%
MUKILTEO	WA	21,000	81,800	104,600	5	78%
NEWBURYPORT HBR	MA	130,000	630,000	730,100	6	86%
OREGON COASTAL PORTS	OR	566,000	2,067,000	815,000	2	254%
PHIL-SEA	PA, NJ, DE	3,275,000	11,401,750	11,338,290	1	101%
SABINE-NECHES WTWY	TX	1,797,000	967,635	1,369,346	5	71%
SAN PABLO BAY & MARE IS	CA	965,500	1,337,479	1,789,765	3	75%
TOLEDO HARBOR	OH	200,000	1,241,500	904,000	7	137%
U.S. NAVAL SUPPLY CENTER	CA	730,000	1,687,500	2,015,000	5	84%

TOTAL ==> 46,007,400 62,919,298 62,369,994

% - PERCENT LOW BID OF GOVERNMENT ESTIMATE

FY 1985 FUNDING CAPABILITIES

Chairman HATFIELD. Prepare for the record a completed list, by project of the Corps funding capability for FY 1985. This should also include the Small Continuing Authorities Program.

General WALL. To be meaningful, Mr. Chairman, a capability not only should be reflective of the preconstruction planning and engineering required prior to the construction of a project, but also the competition for available funds and manpower Army-wide. This is the basis for the amounts proposed in the President's Budget for Army's Fiscal Year 1985 Civil Works Program, and is consistent with the Administration's assessment of national priorities for Federal investments. Nevertheless, the list you have requested is being provided, even though the cited capability amount is for the individual project or study, considering that project or study by itself without reference to the rest of the program. It also should be pointed out that while additional funds for some individual studies or projects could be utilized, as indicated in the list, offsetting reductions would be required in order to maintain the President's budgetary objectives. For construction, capabilities for new starts have been developed for those authorized projects which are ready to proceed and for which the sponsor has expressed a willingness to enter into an agreement for increased cost-sharing. Subject to the foregoing stated qualifications, I will provide for the record the capability for new studies, new planning starts, and new construction starts in Fiscal Year 1985.

[The information follows:]

STUDIES AVAILABLE FOR INITIATION (AMOUNTS IN THOUSANDS)		ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
TYPE	PROJECT OR SURVEY			
ARIZONA				
FDP	NAVAJO INDIAN RESERVATION, AZ, NM & UT..	450	0	450
	STATE SUB-TOTALS	450	0	450
ARKANSAS				
FDP	ARKANSAS RIVER - RUSSELLVILLE - MORRILTON, AR.....	165	0	165
	STATE SUB-TOTALS	165	0	165
CALIFORNIA				
FDP	MAD RIVER, HUMBOLDT & TRINITY COUNTIES, .. CA.....	400	0	400
N	SAN FRANCISCO BAY AND TRIBUTARY DEEP ... WATER PORTS, CA.....	150	0	150
SP	SANTA BARBARA COUNTY, CA.....	219	0	219
N	VENTURA MARINA, CA.....	250	0	250
	STATE SUB-TOTALS	1,019	0	1,019
DIST OF COLUMBIA				
N	METROPOLITAN WASHINGTON DC, ... SEDIMENTATION.....	250	0	250
FDP	WASHINGTON, DC & VICINITY.....	370	0	370
	STATE SUB-TOTALS	620	0	620
FLORIDA				
SP	BREVARD COUNTY, FL.....	109	0	109
SP	BROWARD COUNTY, FL.....	50	0	50
N	CANAVERAL HARBOR, FL.....	50	0	50
N	CLEARWATER SPOIL DISPOSAL, FL.....	60	0	60
N	JUPITER INLET, FL.....	50	0	50
N	TAMPA BAY BIOLOGICAL & WATER QUALITY ... STUDY, FL.....	100	0	100
FDP	TAMPA BAY HURRICAN EVACUATION, FL.....	100	0	100
FDP	TURKEY CREEK, GA.....	150	0	150
	STATE SUB-TOTALS	669	0	669

STUDIES AVAILABLE FOR INITIATION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
GEORGIA				
SP	ST. SIMONS ISLAND, GA.....	150	0	150
	STATE SUB-TOTALS	150	0	150
HAWAII				
FDP	KAILUA-KONA COMPREHENSIVE STUDY, HI.....	280	0	280
	STATE SUB-TOTALS	280	0	280
ILLINOIS				
FDP	GALLATIN COUNTY & VICINITY, IL.....	150	0	150
FDP	SANGAMON RIVER, SOUTH FORK, FLAT BRANCH, IL.....	208	0	208
	STATE SUB-TOTALS	358	0	358
INDIANA				
N	HAMMOND, IN.....	46	0	46
FDP	PIGEON CREEK, IN.....	200	0	200
FDP	WHITEWATER RIVER AND TRIBUTARIES, IN & OH.....	200	0	200
	STATE SUB-TOTALS	446	0	446
IOWA				
FDP	RIVER BASINS OF IOWA, IA.....	778	0	600
	STATE SUB-TOTALS	778	0	600
KENTUCKY				
FDP	METROPOLITAN REGION OF LOUISVILLE, KY...	200	0	200
FDP	TRADEWATER RIVER BASIN, KY.....	200	0	200
FDP	WATER RESOURCES BEN-COST STUDY OF OHIO RIV BASIN(1974 WRD,SEC41).....	750	0	750
	STATE SUB-TOTALS	1,150	0	1,150
MARYLAND				
N	BALTIMORE HARBOR & CHANNELS, MD, ... ANCHORAGES.....	160	0	160
N	BROAD CREEK, PRINCE GEORGES COUNTY, MD..	125	0	125
SP	CHESAPEAKE BAY, (SHORELINE EROSION) MD.. & VA.....	500	0	500
N	CONOWINGO DAM, SUSQUEHANNA RIVER, MD....	150	0	150
	STATE SUB-TOTALS	935	0	935
MICHIGAN				
FDP	O.L.P.L.O.L.E. (GREEN BAY).....	125	0	125
FDP	O.L.P.L.O.L.E. (SAGINAW).....	125	0	125
FC	ST. JOSEPH RIVER, MI & IN.....	300	0	300
N	ST. JOSEPH HARBOR, MI, (COMMERCIAL).....	114	0	114
	STATE SUB-TOTALS	664	0	664
MINNESOTA				
N	EAST TWO RIVERS, MN.....	136	0	136
FDP	MANKATO URBAN STUDY, MN.....	300	0	300
	STATE SUB-TOTALS	436	0	436
MISSOURI				
FDP	CREVE COEUR CREEK, MO (INTERIM - ST. ... LOUIS METRO).....	1,500	0	1,500
FDP	DARDENNE CREEK, MO (INTERIM - ST. LOUIS METRO).....	600	0	600
FDP	GLAIZE CREEK, MO (INTERIM - ST. LOUIS .. METRO).....	1,100	0	1,100
	STATE SUB-TOTALS	3,200	0	3,200

STUDIES AVAILABLE FOR INITIATION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
NEBRASKA				
FDP	NORTH PLATTE RIVER BASIN, NE WY, CO.....	200	0	200
	STATE SUB-TOTALS	200	0	200
NEW JERSEY				
BE	ABSECON ISLAND, NJ (GROUP III) (PHASE .. I).....	850	0	250
FDP	ELIZABETH RIVER, HILLSIDE, AND IRVINGTON, NJ.....	190	0	190
	STATE SUB-TOTALS	1,040	0	440
NEW YORK				
N	BUFFALO HARBOR, NY (RECREATION STUDY)...	100	0	100
	STATE SUB-TOTALS	100	0	100
MISSOURI				
FDP	MISS. RIVER ABOVE MO RIVER, FINAL REPORT, MO.....	144	0	144
	STATE SUB-TOTALS	144	0	144
OHIO				
FDP	BELLEVUE, OH.....	125	0	125
FC	BLACK RIVER, LORAIN COUNTY, OH.....	104	0	104
FC	HURON RIVER, OH.....	104	0	104
FDP	METROPOLITAN REGION OF CINCINNATI, OH...	500	0	500
FDP	VERMILION RIVER, OH.....	105	0	105
	STATE SUB-TOTALS	938	0	938
OREGON				
N	COOS BAY, OR.....	240	0	240
FDP	POWDER R. & TRIBS, OR.....	200	0	200
	STATE SUB-TOTALS	440	0	440
PENNSYLVANIA				
N	DELAWARE RIVER & TRIBS DRIFT REMOVAL, .. PA, NJ & DE.....	135	0	135
FDP	SUSQUEHANNA RIVER BASIN, KEATING DAM, .. PA.....	900	0	900
FDP	SUSQUEHANNA RIV BASIN WATER SUPPLY/DROUGHT MANAGEMENT, PA, NY, & MD....	900	0	900
FDP	TURTLE CREEK BASIN, PA.....	200	0	200
	STATE SUB-TOTALS	2,135	0	2,135
PUERTO RICO				
N	GUAYANES, LAS MAREAS AND GUAYANILLA HARBORS, PR.....	75	0	75
	STATE SUB-TOTALS	75	0	75
SOUTH CAROLINA				
FDP	JOHNS ISLAND, SC.....	100	0	100
	STATE SUB-TOTALS	100	0	100
SOUTH DAKOTA				
FDP	MISSOURI RIVER, YANKTON, SD TO THE MOUTH, IA, KS, MO, NE & SD.....	560	0	547
	STATE SUB-TOTALS	560	0	547

STUDIES AVAILABLE FOR INITIATION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
TEXAS				
FDP	ELM FORK & TRIBS., TX.....	200	0	200
FDP	LITTLE FOSSIL CREEK, TX.....	210	0	210
STATE SUB-TOTALS		410	0	410
WISCONSIN				
FC	LA CROSSE, WI (PHASE I).....	589	0	175
STATE SUB-TOTALS		589	0	175
NATIONAL TOTALS		18,051	0	16,646

CAPABILITIES FOR INITIATION OF CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ALASKA				
N	ST. PAUL ISLAND HARBOR, AK.....	500	0	400
STATE SUB-TOTALS		500	0	400
ARKANSAS				
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 4, AR.....	1,400	0	300
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 6, AR.....	1,500	0	300
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 5, AR.....	1,500	0	300
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, DAM NO. 2, AR.....	2,300	0	400
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 7, AR.....	1,570	0	600
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 3, AR.....	1,500	0	300
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 8, AR.....	1,060	0	300
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 9, AR.....	1,540	0	400
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER .. PURPOSES, L&D NO. 13, AR.....	1,760	0	400
N	WHITE RIVER NAVIGATION-MOUTH TO .. BATESVILLE, AR.....	1,300	0	400
STATE SUB-TOTALS		15,430	0	3,700
CALIFORNIA				
N	RICHMOND HARBOR (DEEPENING), CA.....	600	0	400
STATE SUB-TOTALS		600	0	400
COLORADO				
FC	WESTERLY CREEK, CO (CP&E).....	465	0	365
STATE SUB-TOTALS		465	0	365
CONNECTICUT				
NH	NEW HAVEN HARBOR, CT.....	530	0	450
FC	WESTCHESTER COUNTY STREAMS, BYRAM RIVER, CT & NY.....	700	0	300
STATE SUB-TOTALS		1,230	0	750
HAWAII				
FC	ALENAIO STREAM, HAWAII.....	500	0	150
N	HILO HARBOR, HAWAII.....	330	0	200
MP	WAILUA RIVER HYDROPOWER, HAWAII.....	580	0	200
STATE SUB-TOTALS		1,410	0	550

CAPABILITIES FOR INITIATION OF CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
INDIANA				
FC	LITTLE CALUMET RIVER, IN.....	1,295	0	630
	STATE SUB-TOTALS	1,295	0	630
KANSAS				
FDP	ARK RIV, GREAT BEND, KS, TO TULSA, OK - UPPER LITTLE ARK RIV, KS.....	1,170	0	400
	STATE SUB-TOTALS	1,170	0	400
MARYLAND				
BE	ATLANTIC COAST OF MARYLAND, MD.....	1,800	0	1,050
	STATE SUB-TOTALS	1,800	0	1,050
MICHIGAN				
N	GRAND HAVEN HARBOR, MI (COMMERCIAL).....	625	0	290
	STATE SUB-TOTALS	625	0	290
MINNESOTA				
N	DULUTH SUPERIOR HARBOR, MN & WI.....	525	0	165
FC	MISSISSIPPI RIVER AT ST. PAUL, MN.....	625	0	350
FC	ROOT RIVER AT HOUSTON, MN.....	738	150	150
	STATE SUB-TOTALS	1,888	150	665
MISSOURI				
FC	BRUSH CREEK, KANSAS CITY, MO.....	725	0	350
FC	CAPE GIRARDEAU-JACKSON AREA, MO.....	2,100	0	500
N	ST. LOUIS HARBOR, MO & IL.....	1,800	0	600
	STATE SUB-TOTALS	4,625	0	1,450
NEW JERSEY				
FC	RAHWAY RIV BASIN, UPPER ROBINSONS.....	470	0	150
	BRANCH CLARK&SCOTCH PLAINS,NJ.....			
FC	RARITAN RIVER BASIN, GREEN BROOK.....	6,040	0	1,300
	SUB-BASIN, NJ.....			
	STATE SUB-TOTALS	6,510	0	1,450
NEW MEXICO				
FC	PUERCO RIVER, GALLUP, NM.....	340	0	340
FDP	RIO GRANDE & TRIBS., (RIO PUERCO/RIO ... SALADO), NM.....	2,930	0	500
	STATE SUB-TOTALS	3,270	0	840
NEW YORK				
N	GOWANUS CREEK CHANNEL, NY.....	210	0	150
FC	TONAWANDA CREEK, NY.....	1,260	0	420
	STATE SUB-TOTALS	1,470	0	570
NORTH CAROLINA				
N	WILMINGTON HARBOR NE CAPE FEAR RIVER, ... NC (CP&E).....	380	0	260
	STATE SUB-TOTALS	380	0	260
NORTH DAKOTA				
FC	GRAFTON, ND.....	760	0	300
	STATE SUB-TOTALS	760	0	300
OHIO				
FC	MIAMI RIVER BASIN AT WEST CARROLTON, OH.	570	0	250
	STATE SUB-TOTALS	570	0	250

CAPABILITIES FOR INITIATION OF CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
OKLAHOMA				
N	ARK RIV & TRIBS, HYDROPOWER AND OTHER PURPOSES, L&D NO. 14, OK.....	1,760	0	500
MP	FORT GIBSON LAKE, OK (UNITS 5&6).....	1,870	0	210
FDP	TULSA, OK, URBAN STUDY (FRY CREEK LOCAL PROTECTION BIXBY, OK).....	309	0	309
FDP	VERDIGRIS RIVER, KANSAS AND OKLAHOMA, .. MINGO CREEK, OK (CP&E).....	1,300	400	400
	STATE SUB-TOTALS	5,239	400	1,419
OREGON				
MP	BLUE RIVER POWERHOUSE, OR.....	900	0	900
	STATE SUB-TOTALS	900	0	900
PENNSYLVANIA				
N	LOCKS AND DAMS 7&8, PA & WV (MONONGAHELA RIVER).....	2,500	0	1,600
FC	SAW MILL RUN AT PITTSBURGH, PA.....	400	0	150
FC	WYOMING VALLEY, PA (PHASE I).....	5,700	0	1,800
	STATE SUB-TOTALS	8,600	0	3,550
PUERTO RICO				
N	SAN JUAN HARBOR (PHASE I), PR (CP&E)....	670	0	100
	STATE SUB-TOTALS	670	0	100
RHODE ISLAND				
FDP	BIG RIVER RESERVOIR, RI.....	1,650	0	650
	STATE SUB-TOTALS	1,650	0	650
TEXAS				
N	BRAZOS ISLAND HARBOR (42 FOOT PROJECT),.. TX.....	959	0	300
FDP	LOWER RIO GRANDE BASIN, TX.....	1,200	0	700
FDP	SIMS BAYOU AT HOUSTON, TX.....	1,890	0	600
N	TEXAS CITY CHANNEL, TX.....	1,390	0	400
	STATE SUB-TOTALS	5,449	0	2,000
VIRGINIA				
N	HAMPTON ROADS, DRIFT REMOVAL, VA.....	660	0	335
	STATE SUB-TOTALS	660	0	335
WASHINGTON				
N	EAST, WEST, AND DUWAMISH WATERWAYS, ... SEATTLE HARBOR, WA.....	1,295	0	800
MP	WYNOOCHEE HYDROPOWER/FISH HATCHERY, WA..	2,260	0	500
FDP	YAKIMA RIVER AT UNION GAP, WA.....	535	250	250
	STATE SUB-TOTALS	4,090	250	1,550
ILLINOIS				
FC	LOVES PARK LFP, IL.....	1,425	0	200
	STATE SUB-TOTALS	1,425	0	200
	NATIONAL TOTALS	72,681	800	25,024

PROJECTS AVAILABLE FOR INITIATION OF A E & D
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ILLINOIS				
FC	BIG SWAN D&D, IL.....	13,000	0	100
FC	FORT CHARTRES & IVY LDO, DO NO. 5 & STRINGTOWN D&D NO.4, IL.....	7,900	0	100
	RUSSELL & ALLISON LEVEE, IL.....	16,600	0	150
FC	SCOTT COUNTY D&D, IL.....	14,900	0	100
	STATE SUB-TOTALS	52,400	0	450
KANSAS				
FC	MELVERN & POMONA LAKES (ROAD IMPROVEMENT), KS.....	500	0	25
FC	TUTTLE CREEK LAKE, ROAD & BRIDGE, KS ... (1976 ACT).....	630	0	25
	STATE SUB-TOTALS	1,130	0	50
KENTUCKY				
	CELINA LAKE, KY & TN.....	205,000	0	200
	STATE SUB-TOTALS	205,000	0	200
MISSOURI				
FC	LOWER GRAND RIVER, MO.....	36,900	0	200
	STATE SUB-TOTALS	36,900	0	200
NEW JERSEY				
BE	CORSON INLET - LUDLAM BEACH, NJ.....	76,800	0	120
	STATE SUB-TOTALS	76,800	0	120
PENNSYLVANIA				
FC	PROMPTON LAKE (MODIFICATION), PA.....	39,500	400	400
	STATE SUB-TOTALS	39,500	400	400
PUERTO RICO				
BE	SAN JUAN BEACH, PR.....	960	0	50
	STATE SUB-TOTALS	960	0	50
TEXAS				
HP	BELTON LAKE HYDROPOWER, TX.....	3,780	200	200
HP	ROCKLAND LAKE, TX.....	719,000	0	500
	STATE SUB-TOTALS	722,780	200	700
	NATIONAL TOTALS	1,135,470	600	2,170

PROJECTS AVAILABLE FOR INITIATION OF CONSTRUCTION
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
CALIFORNIA				
FC	PAJARO RIVER, CA.....	2,390	1,300	1,300
	STATE SUB-TOTALS	2,390	1,300	1,300
PENNSYLVANIA				
FC	CONANESQUE LAKE, PA (MOD).....	3,720	1,300	1,300
	STATE SUB-TOTALS	3,720	1,300	1,300
	NATIONAL TOTALS	6,110	2,600	2,600

STUDIES AVAILABLE FOR INITIATION
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY

ARKANSAS				
FDP	GRAHAM BURKE PUMPING PLANT & LOWER WHITE RIVER, AR.....	270	0	270
	STATE SUB-TOTALS	270	0	270
KENTUCKY				
N	HICKMAN HARBOR, KY.....	270	0	270
	STATE SUB-TOTALS	270	0	270
TENNESSEE				
FDP	TIPTONVILLE, TN.....	205	0	205
	STATE SUB-TOTALS	205	0	205
	NATIONAL TOTALS	745	0	745

MAJOR REHABILITATION & DAM SAFETY ASSURANCE PROJECTS AVAILABLE FOR INITIATION
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY

MISSISSIPPI				
FC	SARDIS DAM, MS (DAM SAFETY ASSURANCE)...	9,000	100	100
	STATE SUB-TOTALS	9,000	100	100
	NATIONAL TOTALS	9,000	100	100

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY

ALABAMA				
N	ALABAMA-COOSA RIVER BELOW CLAIBORNE L&D, AL.....	2,052	250	913
N	BAYOU LA BATRE, AL.....	207	0	75
FDP	TOMBIGBEE RIVER AND TRIBUTARIES, AL & MS.....	2,767	0	200
	STATE SUB-TOTALS	5,026	250	1,188
ALASKA				
FDP	GALENA BANK STABILIZATION, AK.....	300	90	90
N	NORTHWESTERN ALASKA HARBORS, AK.....	722	0	135
FDP	RIVERS AND HARBORS, AK.....	9,150	845	1,071
FDP	SMALL HYDROPOWER, AK.....	4,670	621	750
N	SOUTHCENTRAL REGION DEEP-DRAFT NAVIGATION, AK.....	1,972	196	291
	STATE SUB-TOTALS	16,814	1,752	2,337
ARIZONA				
FDP	GILA RIVER & TRIBUTARIES, NOGALES WASH., AZ.....	500	150	150
SP	PHOENIX METROPOLITAN AREA, AZ.....	3,785	0	200
	STATE SUB-TOTALS	4,285	150	350
ARKANSAS				
S	ARKANSAS RIVER BASIN, AR AND OK.....	2,100	0	100
FDP	CLARKSVILLE, AR.....	1,000	50	50
FDP	QUACHITA RIVER BASIN, AR & LA.....	7,960	715	715
COM	RED R BELOW DENISON DAM, COMP BSN STY(AUTH RPT), AR, LA, OK & TX.....	1,899	335	335

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
COM	RED RIV BASIN, AR, TX, LA & OK (COMP)...	1,510	200	200
COM	WHITE RIVER BASIN AUTHORIZATION REPORT, AR & MO.	880	100	100
STATE SUB-TOTALS		15,349	1,400	1,500
CALIFORNIA				
FDP	ANTELOPE VALLEY, CA.	985	140	240
N	BOLINAS LAGOON, CA.	1,035	0	135
FDP	CALLEGUAS CREEK, CA.	1,775	320	320
FDP	COACHELLA VALLEY BASIN, CA.	750	0	300
SPE	COAST OF CALIFORNIA, STORMS AND TIDAL WAVES, CA.	7,410	700	1,000
FDP	EEL RIVER, CA.	1,675	0	225
FDP	QUADALUPE RIVER, CA.	2,261	0	147
N	HUMBOLDT HARBOR & BAY (DEEPENING), CA.	750	0	300
FDP	LOS ANGELES COUNTY DRAINAGE AREA REVIEW, CA.	4,400	450	850
FDP	MORRISON CREEK STREAM GROUP, CA (PHASE I).	0	500	500
N	MORRO BAY HARBOR, CA.	1,050	0	230
N	NORTH COAST OF LOS ANGELES COUNTY, CA.	785	0	200
FDP	NORTHERN CALIFORNIA STREAMS, CA.	7,482	0	196
FDP	NORTHERN CALIFORNIA STREAMS, DRY CREEK, CA.	750	150	150
FDP	NOVOTO CREEK AND TRIBUTARIES, CA.	625	0	190
N	OCEANSIDE HARBOR, CA.	780	0	100
SP	POINT MUGU TO SAN PEDRO BREAKWATER, CA.	1,250	0	300
N	REDONDO BEACH HARBOR (KING HARBOR), CA.	700	0	240
N	SAN FRANCISCO BAY AREA (IN-DEPTH), CA.	3,110	147	321
FDP	SAN FRANCISCO BAY SHORELINE, CA.	3,555	420	910
FDP	SAN JOAQUIN RIVER BASIN, CA.	5,680	445	960
FDP	SAN JOAQUIN RIVER BASIN CALIENTE CREEK, CA.	1,550	0	200
N	SAN LEANDRO BAY, CA.	875	0	300
FDP	SAN LORENZO RIVER SILT REMOVAL, CA.	455	0	200
FDP	SAN LUIS OBISPO COUNTY, CA.	945	150	280
FDP	SANTA ANA RIVER & ORANGE COUNTY, CA.	9,340	300	750
FDP	SANTA BARBARA COUNTY STREAMS, CA.	1,376	242	242
FDP	VIRGIN RIVER & TRIBUTARIES, MOAPA VALLEY, NV.	1,000	100	100
FDP	WALNUT CREEK BASIN, CA.	1,059	0	385
STATE SUB-TOTALS		63,808	4,064	10,271
COLORADO				
FDP	ARKANSAS RIVER AND TRIBUTARIES ABOVE JOHN MARTIN DAM, CO (PH I).	5,125	206	500
FDP	FOUNTAIN CREEK AND TRBS - NORTH OF PUEBLO, CO.	645	100	100
STATE SUB-TOTALS		5,770	306	600
CONNECTICUT				
COM	L.I.S.-THAMESVILLE TIDAL FLOODING, CT.	435	100	100
SPE	LONG ISLAND SOUND - DREDGED MATERIAL CONTAINMENT STUDY, CT.	1,855	66	66
STATE SUB-TOTALS		2,290	166	166
FLORIDA				
N	BISCAYNE BAY, FL.	1,605	0	425
FDP	CENTRAL & SOUTHERN FLORIDA WATER SUPPLY, FL.	2,292	140	140
N	ESCAMBIA RIVER, FL.	285	0	100
FDP	GOLDEN GATE ESTATES, FL.	1,289	0	402
N	MEXICO BEACH INLET, FL.	265	0	133
N	PORT SUTTON CHANNEL, FL.	293	123	123
FDP	SIX MILE CYPRESS SLOUGH, FL.	403	0	194
FDP	ST. JOHN'S RIVER, FL.	713	0	200
FDP	ST. MARY'S RIVER BASIN, FL & GA.	1,125	0	300
FDP	SUWANNEE RIVER, FL.	1,650	0	500
STATE SUB-TOTALS		9,920	263	2,517
GEORGIA				
N	APALACHICOLA RIVER "308" REPORT, GA, AL. & FL.	2,302	250	350
FDP	BRUNSWICK, GA.	970	0	200
N	BRUNSWICK HARBOR, GA.	760	0	275
FDP	DALTON LAKE, GA (PHASE I).	2,392	700	1,000
FDP	NORTHEAST GEORGIA REGION, GA.	1,360	300	520
FDP	SAVANNAH RIVER BASIN, GA, SC & NC.	1,030	0	95
FDP	SOUTH METROPOLITAN ATLANTA REGION, GA.	839	130	130

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
STATE SUB-TOTALS		9,653	1,380	2,570
GUAM				
N	HARBORS & RIVERS IN THE TERRITORY OF GUAM, GU.....	3,450	180	180
STATE SUB-TOTALS		3,450	180	180
HAWAII				
FDP	HARBORS AND RIVERS IN HAWAII, SOUTH KOHALA WATER SUPPLY, HI.....	288	65	65
FDP	HARBORS & RIVERS IN HAWAII, HI.....	3,634	235	235
STATE SUB-TOTALS		3,922	300	300
IDAHO				
FDP	COLUMBIA RIVER & TRIBS, ID, MT, OR, WA, & WY.....	24,016	1,649	2,082
FDP	PALOUSE R. & TRIBS, (FDP) ID & WA.....	729	0	100
FDP	UPPER SNAKE RIVER AND TRIBUTARIES, ID, WY, (PARENT).....	8,039	457	854
STATE SUB-TOTALS		32,784	2,106	3,036
ILLINOIS				
FDP	ALEXANDER AND PULASKI COUNTIES, IL.....	1,300	350	350
FDP	C-SELM, IN & IL.....	5,133	230	336
FDP	CHICAGO LAND UNDERFLOW PLAN, PHASE 1 GDM, IL.....	9,119	810	810
SPE	DIVERSION OF LAKE MICHIGAN WATER AT CHICAGO, IL.....	1,903	0	218
SP	ILLINOIS SHORE OF LAKE MICHIGAN, IL.....	1,572	0	383
FDP	MACKINAW RIVER, IL.....	525	125	125
FDP	MISS RVR COON RAPIDS.....	8,560	1,012	1,012
FDP	VERMILION RIVER, IL.....	470	110	110
STATE SUB-TOTALS		28,648	2,637	3,344
INDIANA				
FDP	FORT WAYNE METROPOLITAN AREA, INDIANA.....	558	225	225
COM	WABASH RIVER BASIN COMPREHENSIVE (AUTH REPORTS), IN & IL.....	2,967	295	695
STATE SUB-TOTALS		3,525	520	920
KANSAS				
FDP	ARK RIV AND TRIBS GREAT BEND KS TO TULSA OK REMAINING.....	7,180	183	500
FDP	ARKANSAS RIVER FROM GREAT BEND, KS, TO JOHN MARTIN DAM, KS & CO.....	2,798	0	150
FDP	GRAND NESSHO RIVER, KS & OK.....	3,460	0	400
FDP	KANSAS AND OSAGE RIVERS, KS.....	5,730	318	500
FDP	VERDIGRIS RIVER, KS & OK.....	3,700	80	80
FDP	VERDIGRIS RIVER KS AND OK, CANEY RIVER.....	465	250	250
STATE SUB-TOTALS		23,333	831	1,680
KENTUCKY				
N	CUMBERLAND-TENNESSEE RIVERS, KY, AL, GA, MS, NC, TN, & VA.....	6,485	655	755
N	GREEN AND BARREN RIVERS, KY & TN.....	1,788	0	300
FDP	KENTUCKY RIVER AND TRIBUTARIES KY.....	2,322	400	400
FDP	UPPER CUMBERLAND RIVER BASIN, KY & TN.....	2,921	0	150
STATE SUB-TOTALS		13,516	1,055	1,605
LOUISIANA				
FDP	AMITE RIVER AND TRIBUTARIES, LA.....	900	150	150
N	GULF INTRACASTAL WATERWAY, LA & TX SECTION.....	4,065	395	395
FDP	LAKE PONTCHARTRAIN-WEST SHORE, LA.....	967	120	120
FDP	LOUISIANA COASTAL AREA - LAND LOSS AND MARSH CREATION, LA.....	620	110	110
FDP	LOUISIANA COASTAL AREA, WATER SUPPLY, LA.....	650	150	150
FDP	LOUISIANA COASTAL AREA, SHORE & BARRIER ISLAND EROSION, LA.....	515	125	125

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
FDP	MERMENTAU, VERMILION, & CALCASIEU RVS & BAYOU TECHE, LA.....	4,950	540	540
	STATE SUB-TOTALS	12,667	1,590	1,590
MAINE				
N	FORE RIVER CHANNEL PORTLAND HARBOR, ME...	432	75	75
SPE	PASSAMAQUODDY TIDAL POWER STUDY, ME.....	5,805	0	500
N	PORTLAND HARBOR, ME.....	400	0	150
FDP	SAINT JOHN RIVER, ME.....	3,760	430	430
	STATE SUB-TOTALS	10,397	505	1,155
MASSACHUSETTS				
FDP	HOOSIC RIVER, MA, VT & NY.....	1,504	C	100
COM	S.E.N.E. - AUTH. REPORTS, MA, RI, & CT..	1,912	180	180
	STATE SUB-TOTALS	3,416	180	280
MICHIGAN				
FDP	G.L.P.L.O.L.E. OVERALL.....	9,959	530	530
N	GREAT LAKES CONNECTING CHANNELS AND ... HARBORS.....	6,750	1,039	1,039
FDP	SAGINAW RIVER BASIN STUDY MI.....	3,685	225	800
	STATE SUB-TOTALS	20,394	1,794	2,369
MINNESOTA				
FDP	MINNESOTA RIVER VALLEY, MN.....	9,522	680	975
FDP	RED RIVER OF THE NORTH, MN + ND.....	6,685	1,079	1,079
FDP	ST CROIX RIVER MN & WI.....	1,127	300	300
	STATE SUB-TOTALS	19,334	2,059	2,354
MISSISSIPPI				
FDP	MISSISSIPPI GULF COASTAL AREAS, MS.....	1,150	0	400
FDP	PASCAGOULA RIVER BASIN, MS & AL.....	2,143	312	312
FDP	PEARL RIVER BASIN, MS & LA.....	7,180	813	813
SPE	TENNESSEE-TOMBIGBEE WATERWAY SPECIAL ... STUDY, MS,AL,TN & KY.....	6,083	112	112
	STATE SUB-TOTALS	16,556	1,237	1,637
MISSOURI				
FDP	OSAGE RIVER BASIN, MO, ABOVE HARRY S ... TRUMAN DAM.....	1,100	200	200
FDP	ST. LOUIS METRO, MO & IL.....	11,150	1,170	1,170
FDP	WEARS CREEK, JEFFERSON CITY, MO (PHASE ... I DM).....	260	110	110
FDP	WHITE RIVER BASIN - COUNTY LINE LAKE, ... MO.....	1,050	120	120
	STATE SUB-TOTALS	13,560	1,600	1,600
NEVADA				
FDP	LAS VEGAS WASH & TRIBUTARIES, NV.....	1,125	200	200
	STATE SUB-TOTALS	1,125	200	200
NEW JERSEY				
N	DELAWARE RIVER COMPREHENSIVE NAVIGATION. STUDY, PA, NJ, & DE.....	6,334	610	690
N	GREAT LAKES TO HUDSON RIVER WATERWAY, ... NY.....	6,270	0	150
FDP	HACKENSACK RIVER BASIN, NJ&NY.....	4,271	100	950
FDP	PASSAIC RIVER BASIN STUDY, NJ & NY ... (PHASE I).....	18,600	1,513	2,150
FDP	RARITAN RIVER BASIN, NJ.....	3,813	200	300
	STATE SUB-TOTALS	39,288	2,423	4,440

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
NEW MEXICO				
FDP	RIO GRANDE AND TRIBUTARIES, NM & CO.....	7,880	425	525
	STATE SUB-TOTALS	7,880	425	525
NEW YORK				
N	ARTHUR KILL CHANNEL, HOWLAND HOOK	667	43	43
	MARINE TERMINAL, NY.....			
N	BIG SANDY CREEK, MEXICO BAY, NY.....	436	0	160
N	BUFFALO HARBOR, NY.....	1,870	120	120
FDP	CATTARAUGUS CREEK, NY.....	357	75	100
FDP	DELAWARE RIVER BASIN, NY, PA, NJ (ICE JAMS).....	480	120	120
COM	GENESEE RIVER BASIN AUTH REPORT, NY.....	768	100	100
SP	LAKE ONTARIO - ST. LAWRENCE RIVER, NY.....	3,755	0	600
N	NY HARBOR AND ADJACENT CHANNELS, NY & NJ.....	7,035	870	1,800
N	ST. LAWRENCE SEAWAY ADDITIONAL LOCKS, NY.....	3,784	470	470
N	UPPER MISSISSIPPI SMALL CRAFT LOCKS, NY.....	250	0	50
	STATE SUB-TOTALS	19,402	1,798	3,563
NORTH CAROLINA				
FDP	EASTERN NORTH CAROLINA ABOVE CAPE	1,487	160	250
	LOOKOUT, NC.....			
FDP	NEUSE RIVER, NC.....	2,025	300	500
FDP	ROANOKE RIVER (SOUTH BOSTON & VICINITY), NC & VA.....	2,523	360	360
SP	WEST ONSLOW BEACH AND NEW RIVER INLET, NC.....	786	0	200
	STATE SUB-TOTALS	6,821	820	1,310
NOT USED				
N	COAST OF NORTHERN CALIFORNIA (HARBORS FOR LIGHT DRAFT VESSELS).....	1,100	0	189
FDP	COLORADO RIVER & TRIBUTARIES ABOVE LEE FERRY, UT, AZ, CO, NM, WY.....	3,120	225	325
FDP	GILA RIVER AND TRIBUTARIES, AZ & NM.....	4,660	200	700
	MERAMEC RIVER BASIN, MO-WATER SUPPLY STUDY.....	600	0	500
	STATE SUB-TOTALS	9,480	425	1,714
OHIO				
BE	ASHTABULA-LAKELINE TO ASHTABULA, OH.....	642	0	260
FDP	CENTRAL OHIO SURVEY, OH.....	3,775	450	650
FDP	CUYAHOGA RIVER BASIN, OH.....	1,402	185	185
N	LAKE ERIE COAST, OH, MI, PA & NY.....	3,223	0	207
FDP	MIAMI RIVER, LITTLE MIAMI RIVER, & MILL CREEK BASINS OH.....	4,194	150	250
FDP	MUSKINGUM RIVER, OH.....	2,054	0	100
FDP	SANDUSKY RIVER, OH.....	873	0	210
FDP	WESTERN LAKE ERIE SHORE, OH.....	1,258	0	200
	STATE SUB-TOTALS	17,421	785	2,062
OKLAHOMA				
COM	ARK RIV & TRIBS, SOUTH CENTRAL & SOUTHEAST AREAS OF OK (COMP).....	1,100	100	100
S	ARKANSAS-RED RIVER BASINS SOLAR ENERGY INVESTIGATIONS OK, TX & KS.....	1,010	0	550
FDP	CANADIAN RIVER AND TRIBS, OK, TX, & NM (REMAINING).....	2,600	100	250
N	CENTRAL OKLAHOMA PROJECT, OK.....	2,510	0	200
FDP	DENISON DAM - LAKE TEXOMA, OK & TX.....	978	0	200
	STATE SUB-TOTALS	8,198	200	1,300
OREGON				
N	COLUMBIA R COAL EXPORT ASTORIA OREGON... ..	2,530	147	600
N	ROGUE RIVER AT GOLD BEACH, OR.....	868	0	90
FDP	UMPQUA RIVER & TRIBS OR.....	2,187	300	300
COM	WILLAMETTE RIVER BASIN, OR (COMPREHENSIVE STUDY).....	2,455	340	430

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
STATE SUB-TOTALS		8,040	787	1,420
PENNSYLVANIA				
FDP	ALLEGHENY RIVER BASIN, PA.....	795	100	100
FDP	KISKIMINETAS RIVER BASIN, PA.....	1,955	200	200
FDP	LEHIGH RIVER BASIN (HYDROPOWER) STUDY, PA.....	2,200	411	500
FDP	MONONGAHELA-YOUGHIOGHENY RIVER BASIN PA, MD & WVA.....	8,552	955	1,255
FDP	OHIO RIVER MAIN STEM, PA, IL, IN, OH, & WV.....	12,275	2,700	2,700
STATE SUB-TOTALS		25,777	4,366	4,755
PUERTO RICO				
FDP	GUANAJIBO RIVER, PR.....	855	0	250
FDP	LA PLATA RIVER AND TRIBUTARIES, PR.....	910	112	112
FDP	RIO GRANDE DE LOIZA, PR.....	911	360	360
STATE SUB-TOTALS		2,676	472	722
SOUTH CAROLINA				
FDP	GILLS CREEK, SC.....	1,799	370	370
FDP	LITTLE PEE DEE - PEE DEE RIVERS, SC & NC.....	1,602	470	470
FDP	LYNCHES RIVER, SC & NC.....	760	0	60
SP	MYRTLE BEACH, SC.....	425	52	52
STATE SUB-TOTALS		4,586	892	952
SOUTH DAKOTA				
FDP	EASTERN SD AND UPPER BIG SIOUX RIVER, SD & IA.....	2,790	240	390
FDP	MISSOURI RIVER, SD, NE, ND, & MT.....	7,540	900	900
FDP	WESTERN DAKOTAS REGION OF SD.....	2,124	165	400
STATE SUB-TOTALS		12,454	1,305	1,690
TENNESSEE				
FDP	METROPOLITAN REGION OF NASHVILLE, TN....	3,920	335	560
STATE SUB-TOTALS		3,920	335	560
TEXAS				
FDP	BUFFALO BAYOU & TRIBUTARIES, TX.....	6,550	900	900
FDP	COLORADO RIVER AND TRIBUTARIES, TX.....	5,400	600	600
FDP	DICKINSON BAYOU, TX.....	1,080	225	300
FDP	JOHNSON CREEK, ARLINGTON, TX.....	930	175	175
FDP	LITTLE CYPRESS CREEK, TX & LA.....	1,710	300	300
FDP	PINE ISLAND BAYOU WATERSHED, TX.....	1,010	100	250
FDP	RED RIVER & TRIBS., ABOVE DENISON DAM, OK & TX.....	4,180	100	400
FDP	SAN JACINTO RIVER & TRIBUTARIES, TX.....	3,260	300	300
STATE SUB-TOTALS		24,120	2,700	3,225
UTAH				
FDP	JORDAN RIVER BASIN, UT.....	2,550	340	390
STATE SUB-TOTALS		2,550	340	390
VERMONT				
COM	CONN R.B. AUTH REPORTS, VT, MA, CT & NH.	3,950	200	400
STATE SUB-TOTALS		3,950	200	400
VIRGINIA				
FDP	ROANOKE RIVER, UPPER BASIN, VA.....	2,812	150	280
N	YORK AND PAMUNKEY RIVERS, VA.....	800	320	320

CAPABILITIES FOR STUDIES UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
STATE SUB-TOTALS		3,612	470	600
WASHINGTON				
FDP	CHEHALIS RIVER AND TRIBUTARIES, WA.....	2,899	100	220
FDP	MILL CREEK WA.....	864	225	340
COM	PUGET SOUND AND ADJACENT WATERS, WA.....	7,752	420	870
N	SEATTLE HARBOR - DUWAMISH WATERWAY, WA...	3,562	150	300
N	SNOHOMISH RIVER (NAVIGATION), WA.....	938	140	140
FDP	YAKIMA VALLEY REGIONAL WATER MANAGEMENT, WA.....	1,908	0	300
STATE SUB-TOTALS		17,923	1,035	2,170
WEST VIRGINIA				
N	BIG SANDY RIVER, WV, KY & VA.....	3,627	180	350
FDP	GUYANDOTTE RIVER BASIN, VIC.....	2,119	150	150
	LOGAN&MULLENS, WV.....			
COM	KANAWHA BASIN COMPREHENSIVE	4,176	300	300
	(AUTHORIZATION REPORTS), WV,VA & NC.....			
N	KANAWHA RIVER, WV.....	3,540	100	350
STATE SUB-TOTALS		13,462	730	1,150
WISCONSIN				
N	HARBORS BETWEEN KENOSHA AND KEWAUNEE, .. WI.....	1,870	0	110
STATE SUB-TOTALS		1,870	0	110
NATIONAL TOTALS		572,972	47,033	77,007

CAPABILITIES FOR CONTINUING CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ALABAMA				
N	MOBILE HARBOR DEEPENING, AL (CP&E).....	4,850	1,000	1,800
FC	THREEMILE CREEK, MOBILE, AL (CP&E).....	950	260	260
FC	VILLAGE CREEK, AL (CP&E).....	505	115	115
MP	WILLIAM BACON OLIVER LOCK AND DAM, AL .. (CP&E).....	4,080	0	2,850
STATE SUB-TOTALS		10,385	1,375	5,025
ALASKA				
FC	BETHEL BANK STABILIZATION, AK.....	550	250	250
STATE SUB-TOTALS		550	250	250
ARIZONA				
FC	HOLBROOK, LITTLE COLORADO RIVER, AZ.....	680	55	55
STATE SUB-TOTALS		680	55	55
ARKANSAS				
FDP	FOURCHE BAYOU IN THE VICINITY OF LITTLE ROCK, AR.....	2,080	700	700
STATE SUB-TOTALS		2,080	700	700
CALIFORNIA				
FC	CACHE CREEK BASIN, CA.....	2,000	450	900
N	SACRAMENTO RIVER DEEP WATER SHIP	2,500	0	875
	CHANNEL, CA.....			
FC	SANTA ANA RIVER, CA (PHASE I).....	20,300	2,500	3,500

CAPABILITIES FOR CONTINUING CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
	STATE SUB-TOTALS	24,800	2,950	5,275
FLORIDA				
SP	INDIAN RIVER COUNTY, FL (CP&E).....	236	0	171
N	JACKSONVILLE HARBOR, HILL COVE, FL (CP&E).....	200	0	150
SP	PANAMA CITY BEACHES, FL (CP&E).....	2,860	400	400
	STATE SUB-TOTALS	3,296	400	721
GEORGIA				
MP	LAKE LANIER REREGULATION DAM, GA (CP&E).....	1,900	700	950
FC	SAVANNAH RIVER BASIN AT GATES CREEK, GA. (CP&E).....	695	325	495
	STATE SUB-TOTALS	2,595	1,025	1,445
GUAM				
FC	AGANA RIVER, GUAM.....	430	280	280
	STATE SUB-TOTALS	430	280	280
ILLINOIS				
FC	NORTH BRANCH CHICAGO RIVER, IL.....	780	0	300
FC	SOUTH QUINCY, IL.....	450	0	150
	STATE SUB-TOTALS	1,230	0	450
IOWA				
FDP	PERRY CREEK, IA.....	515	185	185
	STATE SUB-TOTALS	515	185	185
LOUISIANA				
N	MISS RIVER SHIP CHANNEL, GULF TO BATON ROUGE, LA.....	7,600	1,000	1,000
	STATE SUB-TOTALS	7,600	1,000	1,000
MASSACHUSETTS				
FC	MASSACHUSETTS COASTAL, ROUGHANS POINT, .. REVERE, MA.....	900	150	150
FC	QUINCY COASTAL STREAMS, TOWN BROOK, ... QUINCY, MA.....	600	100	100
	STATE SUB-TOTALS	1,500	250	250
MICHIGAN				
N	MONROE HARBOR MI.....	2,100	0	790
	STATE SUB-TOTALS	2,100	0	790
MINNESOTA				
FC	REDWOOD RIVER AT MARSHALL, MN.....	310	160	160
	STATE SUB-TOTALS	310	160	160
NEW JERSEY				
FC	RAHWAY RIVER BASIN, ROBINSONS BRANCH, .. CITY OF RAHWAY, NJ.....	650	105	150
FC	RAHWAY RIVER BASIN AT SPRINGFIELD, NJ...	980	105	105
	STATE SUB-TOTALS	1,630	210	255
NEW MEXICO				
FDP	RIO GRANDE & TRIBS - MID RIO GRANDE BERNALILLO TO BELEN, NM.....	2,300	600	900
	STATE SUB-TOTALS	2,300	600	900

CAPABILITIES FOR CONTINUING CP&E
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
NEW YORK				
FC	WESTCHESTER CTY STREAMS, MAMARONECK & ... SHELDRAKE RIVERS, NY.....	2,640	300	700
	STATE SUB-TOTALS	2,640	300	700
OHIO				
FC	CENTRAL OHIO AT NELSONVILLE LPP, OH.....	690	200	200
FC	FAIRFIELD, OH.....	600	250	250
	STATE SUB-TOTALS	1,290	450	450
OKLAHOMA				
FDP	PARKER LAKE, OK.....	1,800	300	750
	STATE SUB-TOTALS	1,800	300	750
PENNSYLVANIA				
FC	LOCK HAVEN, PA.....	1,900	800	800
FC	SUSQUEHANNA BASIN AT HARRISBURG,..... PENNSYLVANIA.....	2,900	930	930
	STATE SUB-TOTALS	4,800	1,730	1,730
SOUTH CAROLINA				
N	CHARLESTON HARBOR (PHASE I), SC (CP&E)...	850	0	550
	STATE SUB-TOTALS	850	0	550
SOUTH DAKOTA				
MP	GREGORY COUNTY HYDROELECTRIC PUMPED STORAGE FACILITY, SD.....	5,780	2,400	2,400
	STATE SUB-TOTALS	5,780	2,400	2,400
TEXAS				
FDP	LAKE WICHITA HOLLIDAY CREEK AT WICHITA . FALLS, TX.....	1,370	340	340
FDP	UPPER WHITE OAK BAYOU, & TRIBS., ... VICINITY OF HOUSTON TX.....	3,415	550	725
	STATE SUB-TOTALS	4,785	890	1,065
VIRGINIA				
N	NORFOLK HARBOR AND CHANNELS (DEEPENING), VA.....	12,400	2,000	3,000
FC	RICHMOND, VA (PHASE I).....	3,800	700	1,700
	STATE SUB-TOTALS	16,200	2,700	4,700
WASHINGTON				
N	BLAIR AND SITCUM WATERWAYS, TACOMA HARBOR, WA.....	980	0	326
FC	CHEHALIS RIVER AT SOUTH ABERDEEN AND ... COSMOPOLIS, WA.....	1,050	300	600
N	GRAYS HARBOR CHEHALIS AND HOQUIAM RIVERS, WA.....	2,900	0	1,900
	STATE SUB-TOTALS	4,930	300	2,826
	NATIONAL TOTALS	105,076	18,510	32,912

CAPABILITIES FOR A E & D PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
CALIFORNIA				
FC	COTTONWOOD CREEK, CA.....	772,000	2,500	5,025
FC	GOLETA AND VICINITY, CA.....	46,600	325	600
N	NOYO RIVER AND HARBOR (BREAKWATER), CA..	6,380	0	385
STATE SUB-TOTALS		824,980	2,825	6,010
FLORIDA				
N	TAMPA HARBOR, BRANCH CHANNELS, FL.....	50,000	460	720
STATE SUB-TOTALS		50,000	460	720
ILLINOIS				
FC	HARTWELL D&LD, IL.....	11,600	0	160
FC	HILLVIEW D&LD, IL.....	11,500	0	185
FC	HEREDOSIA LAKE AND WILLOW CREEK D&L DIST, IL.....	9,300	0	390
FC	HEREDOSIA, IL & HEREDOSIA, WILLOW CREEK & COON RUN D&L DIST, IL.....	11,200	0	340
STATE SUB-TOTALS		43,600	0	1,075
KANSAS				
FC	DOUGLASS LAKE, KS.....	82,200	0	400
FC	FORT SCOTT LAKE, KS.....	78,700	0	542
FC	GREAT BEND, KS.....	41,300	300	406
STATE SUB-TOTALS		202,200	300	1,348
LOUISIANA				
FC	RED RIVER WATERWAY, SHREVEPORT, LA TO .. VICINITY INDEX, AR.....	200,000	0	520
FC	RED RVR WATERWAY, LA, AR, OK & TX (INDEX, AR TO DENISON DAM, TX).....	209,000	0	350
STATE SUB-TOTALS		409,000	0	870
MASSACHUSETTS				
BE	NANTASKET BEACH, MA.....	3,520	0	50
BE	REVERE BEACH, MA.....	10,900	0	75
STATE SUB-TOTALS		14,420	0	125
MICHIGAN				
N	CROSS VILLAGE HARBOR, MICHIGAN.....	3,143	0	200
N	HOLLAND HARBOR, MI.....	3,421	0	145
STATE SUB-TOTALS		6,564	0	345
MINNESOTA				
FC	CHASKA, MN.....	18,100	291	291
FC	EAST GRAND FORKS, MINNESOTA.....	12,900	255	450
N	HARRIET ISLAND HARBOR, MN.....	270	0	30
STATE SUB-TOTALS		31,270	546	771
MISSISSIPPI				
N	YAZOO RIVER, MS.....	215,000	100	325
STATE SUB-TOTALS		215,000	100	325
MISSOURI				
FC	HANNIBAL, MO.....	2,571	150	150
STATE SUB-TOTALS		2,571	150	150
NEW JERSEY				
BE	GREAT EGG HARBOR INLET & PECK BEACH, NJ.	96,300	0	200

CAPABILITIES FOR A E & D PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
	STATE SUB-TOTALS	96,300	0	200
NEW MEXICO				
FC	ALAMOGORDO DIVERSION CHANNEL, NM.....	10,900	0	350
FC	RIO GRANDE FLOODWAY (TRUTH OR CONSEQUENCES UNIT), NM.....	6,940	300	300
	STATE SUB-TOTALS	17,840	300	650
NEW YORK				
N	PORT BAY, NY.....	6,795	0	150
N	SHINNECOCK INLET, NY.....	10,700	100	350
FC	SOUTH ELLENVILLE, NY.....	7,590	0	100
	STATE SUB-TOTALS	25,085	100	600
NORTH DAKOTA				
FC	SHEYENNE RIVER FLOOD CONTROL PROJECT, .. ND.....	25,700	0	590
	STATE SUB-TOTALS	25,700	0	590
OHIO				
FC	RENO BEACH OH.....	5,870	101	101
	STATE SUB-TOTALS	5,870	101	101
OREGON				
FC	PENINSULA DRAINAGE DISTRICT NO. 2, OR...	3,200	0	300
	STATE SUB-TOTALS	3,200	0	300
PENNSYLVANIA				
N	DELAWARE RIVER, PHILA., PA TO TRENTON .. NJ(TIOGA TERMINAL).....	2,100	0	100
FC	FRANCIS E. WALTER DAM, .. PENNSYLVANIA-MODIFICATION.....	77,000	850	850
	STATE SUB-TOTALS	79,100	850	950
RHODE ISLAND				
N	BRISTOL HARBOR, RI.....	1,750	0	125
	STATE SUB-TOTALS	1,750	0	125
TEXAS				
MP	TOWN BLUFF HYDROPOWER, TX.....	18,300	340	340
MP	TRINITY RIVER PROJECT TX.....	159,000	0	350
	STATE SUB-TOTALS	177,300	340	690
WASHINGTON				
FC	WENATCHEE CANYONS 1&2, WA.....	41,000	0	50
FC	ZINTEL CANYON DAM, WA.....	8,550	0	500
	STATE SUB-TOTALS	49,550	0	550
WISCONSIN				
N	GREEN BAY HBR, WI 62 MOD.....	5,010	95	95
FC	STATE ROAD AND EBNER COULEES, WI.....	24,700	285	360
	STATE SUB-TOTALS	29,710	380	455
	NATIONAL TOTALS	2,311,010	6,452	16,950

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ALASKA				
FC	CHENA RIVER LAKES, AK.....	262,000	9,700	9,700
N	KAKE HARBOR, AK.....	11,400	25	25
MP	SNETTISHAM, AK.....	150,000	10,000	33,000
STATE SUB-TOTALS		423,400	19,725	42,725
ARIZONA				
FC	PHOENIX, AZ AND VICINITY (STAGE 2 AND REMAINING WORK).....	257,200	7,500	7,500
STATE SUB-TOTALS		257,200	7,500	7,500
ARKANSAS				
N	MCLELLAN-KERR ARK RVR NAVIGATION	544,300	2,800	2,800
N	SYSTEM LOCKS & DAM, AR & OK.....	253,000	2,000	2,000
STATE SUB-TOTALS		797,300	4,800	4,800
CALIFORNIA				
FC	CORTE MADERA CREEK, CA.....	10,000	0	1,700
FC	CUCAMONGA CREEK, CA.....	93,900	1,453	1,453
FC	DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA.....	336,000	14,000	16,900
FC	FAIRFIELD VICINITY STRMS, CA.....	19,600	1,200	1,200
N	FISHERMAN'S WHARF AREA, CA.....	13,700	3,000	3,000
BE	IMPERIAL BEACH, CA.....	3,340	493	493
FC	LOWER SAN JOAQUIN RIVER.....	5,000	0	2,000
FC	LYTLE AND WARM CREEKS, CA.....	37,200	200	200
FC	MERCED COUNTY STREAMS, CA.....	72,200	4,000	4,000
MP	NEW MELONES LAKE, CA.....	376,000	4,500	4,500
N	PORT HUENEME, CA.....	3,380	0	200
N	PORT SAN LUIS, SAN LUIS OBISPO HARBOR, CA.....	10,600	0	800
FC	SACRAMENTO RIVER & MAJOR AND MINOR TRIBUTARIES, CA.....	11,900	200	200
FC	SACRAMENTO RIVER CHICO LANDING TO RED BLUFF, CA.....	14,700	2,000	4,000
FC	SACRAMENTO RIVER FLOOD CONTROL PROJECT, CA.....	75,675	250	250
FC	SACRAMENTO RIVER BANK PROTECTION PROJECT, CA.....	100,000	2,500	5,000
N	SAN FRANCISCO BAY TO STOCKTON, CA.....	203,000	18,400	18,400
FC	SAN LUIS REY RIVER, CA.....	29,200	5,000	5,000
FC	SANTA PAULA CREEK CHANNEL, CA.....	35,000	0	200
FC	SWEETWATER RIVER, CA.....	17,400	4,000	4,000
FC	WALNUT CREEK, CA.....	74,300	11,400	11,400
FC	WILDCAT & SAN PABLO CREEKS, CA.....	19,400	500	500
STATE SUB-TOTALS		1,865,695	73,096	85,196
COLORADO				
FC	CHATFIELD LAKE, COLORADO.....	95,100	2,000	2,000
STATE SUB-TOTALS		95,100	2,000	2,000
FLORIDA				
FC	CENTRAL & SOUTHERN FLORIDA, FL.....	791,000	11,500	11,500
FC	DADE COUNTY, FL.....	47,700	1,400	1,400
BE	DUVAL COUNTY, FL.....	13,200	3,900	3,900
FC	FOUR RIVER BASINS, FL.....	204,000	2,000	2,000
BE	PALM BEACH C. (MARTIN C. TO LK WORTH & S. LK WORTH TO BROWARD C.).....	7,400	2,100	2,100
BE	PINELLAS COUNTY, FL.....	14,900	400	400
N	TAMPA HARBOR-MAIN CHANNEL, FL.....	176,000	13,000	13,000
STATE SUB-TOTALS		1,254,200	34,300	34,300
GEORGIA				
MP	RICHARD B. RUSSELL DAM AND LAKE, GA AND SC.....	538,000	27,000	27,000
STATE SUB-TOTALS		538,000	27,000	27,000

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
HAWAII				
N	BARBERS POINT DO HARBOR, HAWAII.....	57,900	11,827	11,827
FC	KAHOMA STREAM, HI.....	14,900	3,400	3,400
	STATE SUB-TOTALS	72,800	15,227	15,227
IDAHO				
MP	DWORSHAK DAM AND RESERVOIR, IDAHO.....	328,100	2,746	2,746
	STATE SUB-TOTALS	328,100	2,746	2,746
ILLINOIS				
FC	EAST ST. LOUIS AND VICINITY, ILLINOIS...	34,900	3,100	3,100
N	KASKASKIA RIVER NAVIGATION, ILLINOIS...	145,000	5,300	5,300
FC	KASKASKIA ISLAND DRAINAGE AND LEVEE DISTRICT, IL.....	15,700	3,600	3,600
N	LOCK & DAM NO. 26, ALTON, IL & MO.....	829,000	89,500	89,500
FC	MCGEE CREEK DRAINAGE AND LEVEE DISTRICT, ILLINOIS.....	25,500	2,180	2,180
FC	MILAN, ILLINOIS.....	14,400	2,500	2,500
FC	ROCKFORD, ILLINOIS.....	9,860	1,100	1,100
N	SMITHLAND LOCKS AND DAM, IL, IN, & KY...	276,500	1,800	1,800
	STATE SUB-TOTALS	1,350,860	109,080	109,080
INDIANA				
FC	EVANSVILLE, IN.....	49,900	3,000	3,000
	STATE SUB-TOTALS	49,900	3,000	3,000
IOWA				
FC	BETTENDORF, IOWA.....	14,500	3,900	3,900
FC	CORALVILLE LAKE, IOWA.....	27,244	3,037	3,037
FC	DAVENPORT, IOWA.....	28,900	2,300	2,300
FC	LITTLE SIOUX RIVER, IA (DEF CORR).....	4,817	3,267	3,267
FC	MISSOURI RIVER LEVEE SYSTEM, IA, NE, KS, & MO.....	194,000	650	930
FC	WATERLOO, IOWA.....	50,000	2,500	2,500
	STATE SUB-TOTALS	319,461	15,654	15,934
KANSAS				
FC	EL DORADO LAKE, KS.....	90,300	2,391	2,391
	STATE SUB-TOTALS	90,300	2,391	2,391
KENTUCKY				
FC	BIG SOUTH FORK NATIONAL RIVER & RECREATION AREA, KY&TN.....	103,522	10,000	10,000
FC	PAINTSVILLE LAKE, KY.....	61,400	1,300	1,300
FC	SOUTHWESTERN JEFFERSON COUNTY, KY.....	62,800	4,500	4,500
FC	TAYLORSVILLE LAKE, KY.....	93,000	3,100	3,100
	STATE SUB-TOTALS	320,722	18,900	18,900
LOUISIANA				
FC	BAYOU BOUCAU AND TRIBUTARIES, LA.....	24,100	300	300
FC	LAKE PONTCHARTRAIN, LOUISIANA & VICINITY (HURRICANE PROTECTION).....	457,000	17,500	17,500
FC	LAROSE TO GOLDEN MEADOW, LOUISIANA (HURRICANE PROTECTION).....	61,300	5,100	5,100
N	MISS. RIVER, BATON ROUGE TO GULF OF MEXICO, LA.....	170,000	2,000	2,000
N	MISSISSIPPI RIVER-GULF OUTLET, LA.....	499,000	2,000	3,600
FC	MORGAN CITY AND VICINITY, LA (HURRICANE PROTECTION).....	25,600	280	280
FC	NEW ORLEANS TO VENICE, LA (HURRICANE PROTECTION).....	132,300	4,800	4,800
N	RED RIVER EMERGENCY BANK PROTECTION, LA, AR, OK & TX.....	59,600	3,254	3,254
N	RED RIVER WATERWAY-MS RIVER TO SHREVEPORT, LA.....	1,498,000	80,100	105,950
	STATE SUB-TOTALS	2,927,100	115,334	142,784

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
MAINE				
N	JONESPORT HARBOR, ME.....	8,770	25	25
	STATE SUB-TOTALS	8,770	25	25
MARYLAND				
N	BALTIMORE HARBOR & CHANNELS, MD & VA.....	280,000	200	200
	STATE SUB-TOTALS	280,000	200	200
MICHIGAN				
FC	SAGINAW RIVER, MI.....	61,400	0	1,165
	STATE SUB-TOTALS	61,400	0	1,165
MINNESOTA				
FC	BASSETT CREEK, MN.....	21,300	6,000	6,000
FC	BIG STONE LAKE AND WHETSTONE RIVER, MN & SD.....	12,300	460	460
FC	MANKATO AND NORTH MANKATO, MINNESOTA....	97,100	9,500	9,500
FC	WINONA, MINNESOTA.....	30,100	2,053	2,053
	STATE SUB-TOTALS	160,800	18,013	18,013
MISSISSIPPI				
FC	TOMBIGBEE RIVER & TRIBUTARIES, MS & AL..	44,000	2,000	2,000
	STATE SUB-TOTALS	44,000	2,000	2,000
MISSOURI				
FC	BLUE RIVER CHANNEL, KANSAS CITY, ... MISSOURI.....	129,000	2,800	2,800
MP	CLARENCE CANNON DAM AND MARK TWAIN LAKE, MO.....	330,000	7,600	7,600
MP	HARRY S TRUMAN DAM AND RESERVOIR, MO....	544,000	7,400	7,400
FC	LITTLE BLUE RIVER CHANNEL MISSOURI.....	27,400	1,400	1,400
FC	LITTLE BLUE RIVER LAKES MISSOURI.....	139,000	13,000	13,000
FC	LONG BRANCH LAKE, MISSOURI.....	20,200	300	300
N	MISS. RIVER BTN OHIO & MO RIVERS (REGULATING WORKS), MO & IL.....	186,000	3,700	4,700
	STATE SUB-TOTALS	1,375,600	36,200	37,200
NEBRASKA				
FC	PAPILLION CREEK AND TRIBUTARIES LAKES .. NE.....	46,000	2,300	2,300
	STATE SUB-TOTALS	46,000	2,300	2,300
NEW JERSEY				
FC	ELIZABETH RIVER FLOOD CONTROL PROJECT, .. NJ.....	54,600	4,200	4,200
	STATE SUB-TOTALS	54,600	4,200	4,200
NEW YORK				
BE	EAST ROCKAWAY INLET TO ROCKAWAY INLET, .. AND JAMAICA BAY, NY (PART.....	26,800	2,250	2,250
FC	ELLCOTT CREEK NY.....	13,600	2,700	2,700
N	IRONDEQUOIT BAY.....	4,250	2,250	2,250
N	NEW YORK HARBOR, COLLECTION AND REMOVAL OF DRIFT, NY & NJ.....	53,500	4,500	5,500
	STATE SUB-TOTALS	98,150	11,700	12,700
NORTH CAROLINA				
N	AIWW-REPLACEMENT OF FEDERAL HIGHWAY BRIDGES, NC.....	44,100	4,800	4,800
FC	B. EVERETT JORDAN DAM AND LAKE, NC.....	136,000	7,800	7,800
FC	CAROLINA BEACH AND VICINITY, NC.....	9,770	520	520
FC	FALLS LAKE, NC.....	167,000	7,000	7,000
FC	RANDLEMAN LAKE, NC.....	57,400	3,000	3,000
	STATE SUB-TOTALS	414,270	23,120	23,120

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
NORTH DAKOTA				
FC	LAKE DARLING, SOURIS RIVER, NORTH DAKOTA.....	79,300	1,000	1,000
	STATE SUB-TOTALS	79,300	1,000	1,000
OHIO				
FC	MILL CREEK, OH.....	158,000	9,600	9,600
FC	NEWARK, OHIO.....	11,300	85	85
FC	POINT PLACE, OH.....	9,200	1,850	1,850
	STATE SUB-TOTALS	178,500	11,535	11,535
OKLAHOMA				
FC	ARCADIA LAKE, OK.....	85,300	11,500	11,500
FC	SKIATOOK LAKE, OK.....	110,300	2,375	2,375
	STATE SUB-TOTALS	195,600	13,875	13,875
OREGON				
MP	BONNEVILLE SECOND POWERHOUSE OREGON & WASHINGTON.....	624,000	9,000	9,000
MP	JOHN DAY LOCK AND DAM, LAKE UMATILLA, .. OR & WA.....	512,000	5,700	12,600
FC	LOWER COLUMBIA RIVER BASIN BANK	24,800	2,200	2,200
N	PROTECTION, OR & WA.....			
FC	SIUSLAW RIVER & BAR, OR.....	30,400	8,600	8,600
FC	WILLAMETTE RIVER BASIN BANK PROTECTION, .. OR.....	31,000	1,050	1,050
	STATE SUB-TOTALS	1,222,200	26,550	33,450
PENNSYLVANIA				
BE	PRESQUE ISLE, PA.....	15,366	1,160	1,160
FC	WYOMING VALLEY, PA. (REMEDIAL WORK) (DEF CORR).....	29,000	7,600	7,600
	STATE SUB-TOTALS	44,366	8,760	8,760
PUERTO RICO				
N	PONCE HARBOR, PR.....	9,120	25	25
FC	PORTUGUES & BUCANA RIVERS, PR.....	308,000	27,000	27,000
	STATE SUB-TOTALS	317,120	27,025	27,025
SOUTH CAROLINA				
N	COOPER RIVER, CHARLESTON HARBOR, SC.....	172,800	1,997	1,997
	STATE SUB-TOTALS	172,800	1,997	1,997
TEXAS				
N	CORPUS CHRISTI SHIP CHANNEL, TX (1968 .. ACT).....	81,100	10,100	10,100
FC	EL PASO, TX.....	71,100	7,000	7,000
N	FREEPORT HARBOR, TX (1970 ACT)	13,000	2,350	2,350
	(RELOCATION OF NORTH JETTY).....			
N	FREEPORT HARBOR, TX (1970 ACT).....	53,700	100	100
FC	JOE POOL LAKE, TX.....	190,600	18,100	18,100
N	MOUTH OF COLORADO RIVER, TX.....	32,300	4,800	4,800
FC	RAY ROBERTS LAKE, TX.....	280,000	58,000	58,000
FC	SAN ANTONIO CHANNEL IMPROVEMENT, TX.....	85,200	5,000	5,000
FC	SAN GABRIEL RIVER, TX.....	155,000	200	200
FC	TAYLORS BAYOU, TX.....	64,400	4,000	4,000
FC	VINCE AND LITTLE VINCE BAYOUS, TX.....	20,000	4,000	4,000
	STATE SUB-TOTALS	1,046,400	113,650	114,450
VIRGINIA				
FC	VIRGINIA BEACH STREAMS, CANAL #2, VA....	3,630	2,210	2,210
	STATE SUB-TOTALS	3,630	2,210	2,210

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
WASHINGTON				
MP	CHIEF JOSEPH ADDITIONAL UNITS, WA.....	387,000	13,000	15,200
MP	LOWER SNAKE RIVER FISH & WILDLIFE	177,000	17,700	17,700
	COMPENSATION, WA, OR&ID.....			
MP	MT ST. HELENS & VICINITY, WA.....	191,000	0	37,400
	STATE SUB-TOTALS	755,000	30,700	70,300
WEST VIRGINIA				
FC	BEECH FORK LAKE, WV.....	47,900	1,800	1,800
FC	LEVISA & TUG FORKS OF BIG SANDY &	184,000	10,000	10,000
	CUMBERLAND RIVS, WV, VA & KY.....			
FC	STONEWALL JACKSON LAKE W VA.....	198,000	27,000	27,000
	STATE SUB-TOTALS	429,900	38,800	38,800
	NATIONAL TOTALS	17,378,544	824,613	937,908

CAPABILITIES FOR MAJOR REHABILITATION & DAM SAFETY ASSURANCE PROJECTS UNDERWAY
(AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
CALIFORNIA				
FC	LACDA (LOS ANGELES RIVER), CA (MAJOR ... REHAB).....	44,700	10,000	10,000
	STATE SUB-TOTALS	44,700	10,000	10,000
ILLINOIS				
N	BRANDON ROAD L/D (REHAB), ILLINOIS.....	17,500	10,800	10,800
N	LOCKPORT LOCK (REHAB), ILLINOIS.....	20,200	11,900	11,800
N	LOCKS AND DAM 53, IL & KY (REHAB).....	6,060	1,240	1,240
	STATE SUB-TOTALS	43,760	23,840	23,840
MARYLAND				
N	OCEAN CITY HBR & INLET AND SINEPUXENT ... BAY, MD (MAJ REHAB).....	3,700	1,600	1,600
	STATE SUB-TOTALS	3,700	1,600	1,600
OHIO				
FC	MUSKINGUM RIVER LAKES, OH (DAM SAFETY ... ASSURANCE).....	106,000	900	900
FC	MUSKINGUM RIVER LAKES, OH (REHAB).....	46,500	2,200	2,200
	STATE SUB-TOTALS	152,500	3,100	3,100
PENNSYLVANIA				
N	EMSWORTH LOCKS AND DAMS OHIO RIVER PA ... (MAJOR REHAB).....	37,100	985	985
N	MONTGOMERY LOCKS AND DAM OHIO RIVER PA ... (REHAB).....	30,100	7,100	7,100
	STATE SUB-TOTALS	67,200	8,085	8,085
TEXAS				
FC	GRAPEVINE LAKE, TX (MAJOR ... REHABILITATION).....	11,100	4,200	4,200
	STATE SUB-TOTALS	11,100	4,200	4,200
WASHINGTON				
N	LAKE WASHINGTON SHIP CANAL, ...	6,800	1,005	1,005
	WA(REHABILITATION).....			
FC	MILL CREEK LAKE, WA (REHAB).....	17,400	2,100	2,100
	STATE SUB-TOTALS	24,200	3,105	3,105
	NATIONAL TOTALS	347,160	53,930	53,930

CAPABILITIES FOR STUDIES UNDERWAY
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ARKANSAS				
FDP	EASTERN ARKANSAS REGION COMPREHENSIVE .. STUDY, AR.....	2,000	575	575
FDP	ST. FRANCIS RIVER BASIN BELOW .. WAPPAPELLO LAKE, AR & MO.....	3,060	340	340
	STATE SUB-TOTALS	5,060	915	915
KENTUCKY				
FDP	BAYOU DU CHIEN, KY.....	655	200	200
FDP	MAYFIELD CREEK AND TRIBUTARIES, KY.....	685	155	155
FDP	MISSISSIPPI RIVER - EAST BANK LEVEES, .. KY & TN.....	1,050	0	200
	STATE SUB-TOTALS	2,590	355	555
LOUISIANA				
FDP	ATCHAFALAYA BASIN (WATER & LAND RESOURCES), LA.....	6,870	500	500
FDP	BOEUF-TENSAS BASIN SOUTH AR-NORTH LA....	6,160	225	1,030
FDP	LARTO LAKE - SALINE LAKE AREA, LA.....	1,330	0	240
	STATE SUB-TOTALS	14,360	725	1,770
MISSISSIPPI				
FC	MISS RIV, EAST BANK, VICKSBURG - YAZOO .. AREA, MS (PHASE I).....	355	0	150
FDP	SOUTHWEST MISSISSIPPI TRIBUTARIES BASIN, MS.....	2,300	100	100
FDP	YAZOO RIVER BASIN MS.....	8,320	530	730
	STATE SUB-TOTALS	10,975	630	980
MISSOURI				
FDP	ST. FRANCIS RIVER, MO & AR (FISH & WILDLIFE).....	900	0	180
	STATE SUB-TOTALS	900	0	180
TENNESSEE				
FDP	OBION AND FORKED DEER RIVERS AND TRIBUTARIES, TN & KY.....	1,450	0	300
	STATE SUB-TOTALS	1,450	0	300
	NATIONAL TOTALS	35,335	2,625	4,700

CAPABILITIES FOR CONTINUING CP&E
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
LOUISIANA				
FC	BUSHLEY BAYOU AREA LA.....	1,311	0	300
	STATE SUB-TOTALS	1,311	0	300
MISSOURI				
FC	ST JOHNS BAYOU AND NEW MADRID FLOODWAY .. MO.....	2,000	0	500
	STATE SUB-TOTALS	2,000	0	500
	NATIONAL TOTALS	3,311	0	800

CAPABILITIES FOR A E & D PROJECTS UNDERWAY
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ARKANSAS				
FC	L'ANGUILLE RIVER ARKANSAS.....	25,300	100	500
	STATE SUB-TOTALS	25,300	100	500
LOUISIANA				
FC	MISSISSIPPI DELTA REGION, SALINITY CONTROL STRUCTURE, LA.....	33,200	700	700
	STATE SUB-TOTALS	33,200	700	700
TENNESSEE				
FC	HARRIS FORK CREEK TENNESSEE AND KENTUCKY.....	16,400	130	130
	STATE SUB-TOTALS	16,400	130	130
	NATIONAL TOTALS	74,900	930	1,330

CAPABILITIES FOR CONSTRUCTION PROJECTS UNDERWAY
MR & T (AMOUNTS IN THOUSANDS)

TYPE	PROJECT OR SURVEY	ESTIMATED FEDERAL COST	FY 1985 APPROVED BUDGET	FY 1985 CAPABILITY
ARKANSAS				
FC	ST. FRANCIS BASIN, AR & MO.....	379,000	6,300	11,910
	STATE SUB-TOTALS	379,000	6,300	11,910
KENTUCKY				
FC	REELFOOT LAKE-LAKE NO 9, KY & TN.....	10,600	100	100
	STATE SUB-TOTALS	10,600	100	100
LOUISIANA				
FC	ATCHAFALAYA BASIN, LA.....	1,555,000	23,000	44,000
FC	BAYOU CECODRIE AND TRIBUTARIES, LA.....	25,000	200	200
FC	MISSISSIPPI RIVER LEVEES, AR, IL, KY, .. LA, MS, MO & TN.....	1,366,000	32,000	36,600
FC	OLD RIVER, LA.....	315,000	67,300	67,300
FC	TENSAS BASIN, AR & LA.....	454,000	12,100	13,100
FC	TENSAS RIVER NATIONAL WILDLIFE REFUGE, .. LA.....	40,000	0	16,400
	STATE SUB-TOTALS	3,755,000	134,600	177,600
MISSISSIPPI				
FC	CHANNEL IMPROVEMENT, AR, IL, KY, LA, MS, MO & TN.....	2,932,000	55,000	88,000
FC	YAZOO BASIN, MS.....	1,490,000	16,370	25,370
	STATE SUB-TOTALS	4,422,000	71,370	113,370
TENNESSEE				
FC	WEST TENNESSEE TRIBUTARIES TN.....	107,000	2,400	2,900
	STATE SUB-TOTALS	107,000	2,400	2,900
	NATIONAL TOTALS	8,673,600	214,770	305,880

CAPABILITIES - CONTINUING AUTHORITIES PROGRAM

Capabilities for the Continuing Authorities Program are programmatic in nature and are based on current Administration cost-sharing proposals similar to those worked out with sponsors of Fiscal Years 1983, 1984, and 1985 new construction starts. Since no definite cost-sharing proposals have been developed for navigation projects, the capability for Section 107 is the budget amount. The qualifying language applies to the capabilities for these programs just as for individual project capabilities.

<u>PROGRAM</u>	<u>FY 1985 BUDGET AMOUNT</u>	<u>FY 1985 CAPABILITY</u>
Section 205	19,700	30,000
Section 208	600	800
Section 107	9,875	9,875
Section 103	975	2,775
Section 111	275	875
Section 14	<u>5,300</u>	<u>6,300</u>
Total	36,725	50,625

STATUS OF PROJECTS IN LITIGATION

Chairman HATFIELD; Would you supply for the record an update of all of your projects which have been initiated but are being delayed due to litigation?

General BRATTON. We will provide status of litigation for the record:

[The information follows:]

STATUS OF PROJECTS IN LITIGATION

As of 10 February 1984 the following Corps projects are in litigation:

a. Barber's Point, Hawaii -On 9 February 1983, the Judge dissolved, effective seven days from his order, the Temporary Restraining Order which had prohibited blasting at the project site. The Plaintiffs are expected to file an emergency appeal in the Ninth Circuit. The District Court refused to issue a preliminary injunction. On January 5, 1984, the Court granted the Government's Motion for Summary Judgment. (Eric Enos v. Marsh, D. Hawaii)

b. Cooper Lake, Texas -On 30 December 1982, the District Court issued a decision that the Supplemental Environmental Impact Statement is legally inadequate. The Court continued the injunction preventing work on the project, which has been in effect since 1978. The Government appealed. Oral arguments are scheduled for March, 1984. (Texas Committee on Natural Resources v. Alexander, E.D. Texas)

c. Cross Florida Barge Canal, Florida -In 1981, the Court Dismissed the lawsuit but continued in effect an injunction prohibiting the Corps from doing any work in the canal right of way without its approval. (Environmental Defense Fund v. Corps of Engineers, M.D. Fla.)

d. Harvey Canal-Bayou Barataria Levee, Louisiana, -Landowners challenged the validity of the Corps decision to modify this flood control project by deleting land reclamation features, including a pumping station. In 1980 the District Court held the modification was valid. The plaintiffs appealed. On 17 March 1982, the Fifth Circuit held that, while the decision was based on cogent policy reasons and was not arbitrary, it was issued without first obtaining local assurances for the modification. The case was remanded to the District Court, which in turn remanded the matter to the Corps with instructions to supplement the record. The Supplement has been prepared and the parties are awaiting a new trial date. (Creppel v. U.S. Army Corps of Engineers, Civ. No. 77-25)

e. Kaulana Bay, Hawaii -A hearing on the Plaintiffs motion for a preliminary injunction to stop the project has been postponed until March. The Corps has agreed not to award the contract for the period until then. (*Ahia v. Marsh, et al., D. Hawaii*)

f. Lake Pontchartrain Hurricane Protection, Louisiana -In 1977, the Court enjoined work on the Chalmette and New Orleans East portions of the hurricane protection plan and on the proposed barrier structures at Chef Menteur Pass and the Rigolets; the Court ruled that the EIS was inadequate. In 1978, at the Government's request, the Court modified its order, ruling that certain portions of the project which had minor environmental impacts, which afforded flood protection and which were separate and independent from the barrier structures were excluded from the injunction. A revised environmental impact statement has been prepared and filed with EPA. (*Save Our Wetlands, Inc. v. Rush, E.D. La.*)

g. Libby Additional Units and Reregulating Dam, Montana -In 1978, the Court enjoined construction on the project, finding that Congress had not authorized it and that the Corps had not considered alternatives adequately. The Government appealed, and the Ninth Circuit enjoined construction of the reregulating dam and allowed placement of additional units. The Court found that the reregulating dam was not authorized, but it did not rule on the adequacy of the Environmental Impact Statement. The injunction remains in effect. (*Libby Rod and Gun Club v. Potent, D. Wash.*)

h. Luxapalia Creek, Alabama and Mississippi -Construction on this project has been enjoined since 1976. The Corps is currently engaged in studies leading toward a new Environmental Impact Statement. In 1981, the State of Alabama and the United States filed a joint motion for dissolution of the injunction and dismissal of the suit. The Alabama Conservancy, Inc. and Birmingham Audubon Society opposed the motion and moved to intervene. In 1982, the Court refused to dismiss the case and permitted the environmental groups to intervene. No hearings are currently scheduled. (*State of Alabama v. U.S. Army Corps of Engineers, N.D. Ala.*)

i. Papillion Creek and Tributaries, Nebraska. -The original project called for the construction of 21 dams in the Papillion Creek Basin. In 1973, the Court enjoined construction at site 10, concluding that because the rest of the project was being reevaluated and was likely to be modified, continuation of work at site 10 was not within the Congressional mandate. That injunction remains in effect. Congress appropriated funds for sites 18 and 20 in fiscal year 1981, and in 1982 the Plaintiffs moved to enjoin work on site 18. The Court denied the motion in September 1982. (*Papillion Valley Preservation Association v. Corps of Engineers, D. Neb.*)

j. Santa Paula Creek Flood Control, California -This project was enjoined in 1976, because the Court found the Environmental Impact Statement inadequate. A new environmental impact statement has been prepared and is under review. (*Friends of Santa Paula Creek v. Callaway, C.D. Cal.*)

k. Stonewall Jackson Lake Project, West Virginia -The lawsuit is in the discovery phase. The Court denied the Plaintiff's motion for a preliminary injunction, which would have stopped work on the project, in 1980. Construction is continuing. No trial date has been set. (*National Wildlife Federation v. Alexander, N.D. W. Va.*)

l. Tampa Harbor, Florida. On 22 December 1982, the Court ruled that the Corps was illegally disposing dredged material into the Ocean; EPA's designation of the disposals site was improper and the Corps studies were inadequate. Continued dumping at the site was enjoined. The Government did not appeal the decision. EPA has designated an alternate site and the Corps is soliciting bids for the project. (*Manatee County v. Gorsuch, M.D. Fla.*)

m. Wallisville Lake Trinity River, Texas -The projects have been enjoined since 1973. In 1983 Congress modified the Wallisville project with respect to its physical elements and planned operation. Preparation of an environmental

impact statement on the revised project is nearing completion. With regard to Trinity River, review of a General Design Memorandum and accompanying Environmental Impact Statement is pending. (Sierra Club v. Froehle, S.D. Tex.)

n. West Tennessee Tributaries, Tennessee -The Court enjoined work on this project in 1973 on the ground that the Environmental Impact Statement prepared for it was legally inadequate. In 1978, the Court also found the Supplemental Environmental Impact Statement inadequate and continued the injunction. The injunction remains in effect. On 9 February 1983, the Corps filed a second supplemental Environmental Impact Statement with EPA. The parties are pursuing settlement negotiations, and no further hearings are scheduled at this time. (Akers v. United States, W.D. Tenn.)

The litigation involving Richard B. Russell Dam, Stockton Dam, Harry S. Truman, and Tennessee-Tombigbee Waterway has been concluded.

STATUS OF SURVEY REPORTS

Chairman HATFIELD. Would you provide for the record a tabulation showing the current status of all survey reports similar to that provided on page 171 of last year's hearing.

General BRATTON. A summary form and complete listing of the various stages of review of reports currently at the Washington follows:

WASHINGTON LEVEL REPORTS

SUMMARY OF FEASIBILITY REPORT REVIEW STATUS

	<u>Recommending Federal action</u>	<u>Not recommending Federal action</u>
With/BERH	8	4
With/OCE	43	18
With/ASA (CW)	75	3
With/Congress	42	2

WASHINGTON LEVEL PROCESSING OF REPORTS
RECOMMENDING FEDERAL ACTION

REPORT NAME BY DIVISION	TYPE	DATE OF DIV CIR NOTICE	DATE OF BRI/MRC ACTION	DATE OF BRI/MRC REPORT	DATE OF ST & AG ST & AG	DATE OF INT CRT INT CRT	DATE OF COE RPT COE RPT	DATE TO OMB OMB	DATE TO OMB CRT LTR DATE	DATE TO SA FOR CONGRESS	REMARKS
LOWER MISSISSIPPI VALLEY White Rvr Nav to Batesville, AR	NAV	28Sep79	23Jul80	24Jul80	9Jan81	26Apr81	23Dec81	26Jan82			
L&D 26 (Repl) Hydro, IL & MO	HYD	21Mar83	27Jun83	8Aug83							
Late Pontchartrain, W Shore, LA	NAV	28Mar77	17Jan78	17Jan78	17Apr78	7Aug78	27Jul78	14Feb79	20Feb83		
SP											
Mississippi Rvr Ship Chnl Gulf to Baton Rouge, LA	NAV	30Oct81	9Feb82	1Apr82	8Jun82	25Feb83	35Apr82	9Apr83	21Apr83		
Red River Waterway F&M Mitigation, LA	F&M	8Nov83									
Maline Cr, MO	FDP	13Mar81	8Mar82	5Apr82	4Jun82	16Jun82	10Aug82	2Nov82	5Nov82		
St. Louis Har, MO & IL	NAV	27Nov82	3Mar83	6Apr83	19May83	15Jul83	17Aug83				
MISSISSIPPI RIVER COMMISSION Eight Mile Cr, AR	FDP	10Apr77	24May77	24May77	19Jan79	27Apr79	30May79	10Aug79	17Jan84		
Helena Har, Phillips Co, AR	NAV	16Jan78	7Mar78	7Mar78	29Nov79	11Mar80	15May80	17Oct80			
Helena, AR	FDP	15Oct82	16Dec82	16Dec82	12Jan83	24Mar83	14Apr83	22Jun83	27Jun83		
West Memphis, AR	FDP	30Dec82	25Apr83	25Apr83	17Jan79	6Mar79	18Apr79	16Sep80	24Sep80		
West Kentucky Tribs Mit, KY	F&M	None	14May76	10May76	17Jan79	6Mar79	18Apr79	16Sep80	24Sep80		
Atchafalaya Bas Flood Sys, LA	FDP	15Jan82	19Apr82	20Apr82	30Jul82	16Oct82	18Nov82	28Feb83	2Mar83		
Bushley Bayou, Red Rvr, LA	FDP	18Aug78	17Aug78	17Aug78	9Mar79	28Aug79	8Jun79	30Apr80	6Aug80		
[PHI]								12Aug82	31Aug82		
St. Johns Bayou & New Madrid Floodway, MO (PHI)	FDP	29Sep80	29Jan82	29Jan82	14Jul82	8Oct82	27Sep82	4Jan83	3Feb83		

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRH/MC ACTION	DATE OF BRH/MC REPORT	DATE OF ST & AG	DATE OF ST CMTS	DATE OF INT CMT	DATE OF COE RPT	DATE TO OMB	DATE TO OMB LTR	DATE TO OMB CHT	DATE TO SA FOR CONGRESS	DATE TO CONGRESS	REMARKS
Greenville Har, MS (PHI)	NAV	None	3Mar76	3Mar76	18Apr77	25Apr77	16Jun77	15Nov77	18Nov77	9Jun78				
Vicksburg Har, MS	NAV	20Aug76	13Sep76	13Sep76	1Dec77	4Apr78	7Mar78	22Feb82	18Mar82					
Yazoo Riv Mit, MS	FAML	16Aug82	16Dec82	16Dec82	28Mar83	2Jun83	22Jul83	13Aug79	29Aug79					
Horn Lake Cr, TN & MS (PHI)	FDP	31Aug81	28Jan82	28Jan82	8Jul82	25Sep82	6Oct82	4Jan83	31Jan83	20Sep83	22Dec83	6Jan84		
Memphis Har, TN	NAV	30Mar77	24May77	24May77	7Jan80	30Sep80	15May80	25Feb81	4Mar81					
Monmouth Cr, TN & MS (PHI)	FDP	28Sep81	28Jan82	28Jan82	16Jul82	23Aug82	23Sep82	23Dec82	30Dec82					Further action completed
MISSOURI RIVER Metro Denver & S Platte Riv & Trib, CO, WY & NE	FDP	9Jul80	18Feb81	27Mar81	5May81	45Sep81	30Jul81	23Oct81	12Jan82	16Dec83				
Missouri Riv Bank Stab/Nav Mit Proj., IA, MS, MO, KS	FAML	13Jun81	25Sep82	30Sep82	18Nov82	12Jan83	14Feb83	14Jul83	28Jul83					
Perry Cr, IA	FDP	12Jan81	13May81	29Jun81	23Jul81	10Dec81	30Oct81	4Feb82	10Feb82	19Sep83	22Dec83	26Jan84		
Brush Cr & Trib, MO & KS	FDP	20Nov81	8Mar82	1Apr82	22Apr82	30Apr82	23Jun82	3Jan83	4Feb83					
Harry S. Truman Dam, Dnstr Mit, Miss, MO	FAML	17Nov80	18Feb81	18Mar81	24Apr81	25Aug81	17Jul81	21Dec81	11Jan82					
Gregory Co Hydro Pumped Strg Fac, SD	HYD	16Jun82	25Sep82	22Sep82	15Oct82	13Jan83	14Jan83	24Apr83	2May83					
NORTH ATLANTIC Atlantic Coast of MD & Assateague Is., VA	SP	16Oct80	19Feb81	31Mar81	22Apr81	2Jul81	28Apr81	29Sep81	15Oct81	27May83				
Barnegat Inlet, NJ (PHI)	NAV	4Nov81	8Mar82	9Apr82	16Jun82	29Sep82	3Sep82	20Jan83	18Feb83					Returned 12/16/83 for modification.
Cape May Inlet to Lower Comshila, NJ (PHI)	SP	8Oct80	13May81	29Jun81	28Jul81	8Sep81	28Oct81	23Oct81	20Jan82					
Green Brook, Raritan Riv Bsn, NJ	FDP	6Oct80	18Feb81	16Mar81	23Apr81	28Jul81	17Jul81	4Sep81	18Sep81	14Nov83	22Dec83	26Jan84		
Goanous Cr Chnl, NY	NAV	27Nov81	9Mar82	3Apr82	5May82	4Aug82	27Jul82	14Sep82	27Sep82	27May83	1Aug83	12Sep83	7Oct83	

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COM NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE OF ST & AG ST CRTS	DATE OF INT CRT	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB LTR DATE	DATE TO REMARKS SA FOR CONGRESS
Kill Van Kull, Newark Bay Chilis, NY & NJ	MHV	30Oct80	13May81	10Jun81	7Jul81	10Nov81	14Oct81	23Dec81		
Raapo & Mahesh Rv., Mahesh & Suifford, NY (Ph I)	FDP	30Dec83								
Harrisburg, Ph	FDP	7Dec77	21Jun78	21Jun78	31Aug78	31Oct78	30Nov78	16May79	23May79	8Apr83
Lock Haven, PA (PHI)	FDP	21Sep80	19Feb81	14Apr81	12May81	1Jun81	18Aug81	14Oct81	7Jan82	14Nov83
Wyoming Valley, PA (PHI)	FDP	18Feb82	25Sep82	1Nov82	8Dec82	7Jan83	10Feb83	19Oct83	2Nov83	
Hampton Roads Drift Res, VA	MHV	13Aug82	14Dec82	19Jan83	10Feb83	13Jun83	13Apr83	19Oct83	9Nov83	
Norfolk Hbr & Chilis, VA	MHV	29Aug80	19Nov80	21Jan81	3Mar81	15May81	17Jul81	20Nov81	4Dec81	25May82
Richmond, VA (PHI)	FDP	2Feb81	13May81	11Jun81	1Jul81	25Sep81	23Sep81	16Nov81	4Dec81	8Jul83
Virginia Beach, VA	SP	30Dec83								
Willoughby Spit & vic, VA	SP	1Apr83	27Jun83	8Aug83	23Sep83	21Dec83	17Nov83			
NORTH CENTRAL Green Bay L&D No. 2, IA	FDP	2Nov79	3Apr80	23Sep80	21Oct80	9Mar81	16Jan81	21Oct81	10Nov81	13Jun83
Mississippi River Lock & Dam IA (Hydro), IA	HYD	14Sep83	1Dec83							50Oct83
Muscataine Is Levee Dist, IA	FDP	15Aug75	9Dec75	9Dec75	3Aug76	4Nov76	17Jan77	22Jul77	3Aug77	
Brandon Rd L&D Hydro, IL	HYD	23Jul82	15Dec82	18Jan83	23Feb83	28Mar83	6May83			
Casino Beach, Illinois Shore- line, IL	SP	27Apr83	1Dec83							
Bresiden L&D Hydro, IL	HYD	23Jul82	15Dec82	18Jan83	11Feb83	8Apr83	4May83			
Loves Park, Rock Rvr at Rock- ford, IL	FDP	9Apr79	14Nov79	2Jan80	29Feb80	27May80	6Jun80	15Sep80	24Sep80	22Apr83
North Branch Chicago River, IL (Ph I)	FDP	7Sep83	1Dec83	3Jan84						

Reid 11/83 to Reformulate

HD 98-121

40Oct83

29Sep83

1Aug83

25Sep83

40Oct83

HD 98-121

40Oct83

29Sep83

1Aug83

25Sep83

40Oct83

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRH/MC ACTION	DATE OF BRH/MC REPORT	DATE OF ST & AG ST CMTS	DATE OF INT CMT CODE RPT	DATE TO DATE TO SA FOR CONGRESS	DATE TO DATE TO LTH DATE CONGRESS	REMARKS
South Quincy Bldg, IL	FDP	5Nov82	2Mar83	25Mar83	17May83	15Jul'83	25Sep83	24Jan84	
Starved Rock Lab Hydro, IL	HYD	29Mar83	27Jan83	18Jul83					
Indiana Shoreline, IN	SP	10Sep82	14Dec82	29Jan83	1Mar83	9Jun83	9Jun83	6Jan84	
Little Calumet Rvr, IN (PHI)	FDP	12Oct82	28Sep83	14Nov83	16Jan84				
Grand Haven Hbr, MI	NAV	5Dec77	6Apr78	30Jun78	22Nov78	4Jun79	1Mar79	9Oct79	11Feb82
Monroe Hbr, MI	NAV	21Mar80	26Nov80	22Jan81	24Feb81	3Jun81	16Jun81	23Nov81	9Jun83
Deluth-Superior Hbr, MN & WI	NAV	5Nov82	2Mar83	4Apr83	7Jun83	6Sep83	26Sep83		
Marshall, MN (Sec 216)	FDP	13Oct79	18Feb81	16Mar81	27Apr81	24Jun81	30Jul81	16Nov81	25Nov81
St. Paul, MN (Sec 216)	FDP	30Apr82	25Sep82	22Sep82	14Oct82	13Mar83	5Jan83	16Jun83	27Jan83
Part River, Grafton, MO (PHI)	FDP	28Feb83	27Jun83	18Jul83	11Nov83	4Jan84	20Jan84		
Shenandoe Rvr, MO	FDP	25Apr83	1Dec83	23Jan84					
Ellicott Cr Bn, NY (SPAC)	FDP	11Jan78	6Apr78	26Jul78	29Aug78	1Dec78	8Dec78	2Apr79	6Apr79
Olcott Hbr, NY	NAV	24Jan79	31Jul79	21Aug79	24Sep79	18Dec79	25Jan80	11Jan80	30Jan80
Tonawanda Cr, Buffalo Metro Area, NY	FDP	30Jul82	28Sep83	19Oct83	25Jan84				
Lorain Harbor, OH	NAV	27Jan84							
Haussie Bay State Park, OH	SP	30Aug83	1Dec83						
Presque Isle Peninsula, PA (PHI)	SP	31Jul80	19Nov80	29Jan81	27Feb81	17Apr81	26May81	20Jul81	27Oct81
NEW ENGLAND New Haven Hbr, CT	NAV	20May81	9Sep81	15Oct81	24Nov81	19Feb82	4Feb82	24Jul82	18Aug82
								27May83	12Sep83
								26Sep83	30Oct83

Auth 27Dec81.

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG ST CMTS	DATE OF INT CMT	DATE OF COD RPT	DATE TO SA FOR ONB	DATE TO ONB CMT LTR DATE	DATE TO SA FOR CONGRESS	DATE TO REMARKS
Roughans Point, Revere, MA	FDP	3Jan83	1Dec83	24Jan84							
Town Brook, Quincy Coastal Stress, MA	FDP	29Sep80	18Feb81	16Mar81	10Oct81	17Jul81	14Dec81	8Jan82	13Jun83		
Portsmouth Hbr, NH & ME	NAV	4Apr83									Deferred
Big Rvr Res, RI	FDP	3Aug81	9Mar82	5Apr82	6Aug82	12Aug82	9Mar83	10May83			
NORTH PACIFIC											
Bethel Bank Stabilization, AK	SP	30Jun82	14Dec82	26Jan83	23Feb83	10Jun83	10May83	30Jul83	10Aug83		
Saint Paul Is Hbr, AK	NAV	30Jun82	14Dec82	24Jan83	23Feb83	14Jun83	10May83	10Aug83	16Aug83		
Scammon Bay Snail Hydro, AK	HYD	8Jun82	2Sep82	12Oct82	3Nov82	10Jun83	12Jan83	9Aug83	16Aug83		
Valdez, S Central Railbelt, AK	HYD	31Aug81	8Mar81	1Apr82	28Apr82	17Jun82	6Aug82	29Oct82	14Jan83	20Dec83	
Lucky Peak, ID	HYD	10Apr78	21Jun78	21Jun78	13Sep78	23Apr79	7Dec78	17Mar80	24Apr80	4Feb82	
Blue Rvr Lake, OR	HYD	30Jun82	2Sep82	22Sep82	3Nov82	10Feb83	21Jan83	9Aug83	16Aug83		
Bonneville Nav Lock, WA & OR	NAV	21Oct77	6Apr78	5Dec78	8Jan79	3Apr79	30Apr79	14Mar80	19Apr83		
Centralia, WA	FDP	11Apr83	28Sep83	18Oct83	18Jan84			10Feb83			
City Waterway, Tacoma Hbr, WA	NAV	None	None	None	26Nov82	30Mar83	1Feb83	5May83	2Jun83		Death. recommendation
East, West & Bussanish WAs, WA	NAV	20Apr83	28Jun83	16Jul83	9Sep83	22Nov83	15Dec83				
Grays Hbr, Chehalis & Nisqually Rivs, WA	NAV	15Sep82	14Dec82	17Jan83	2Mar83	20May83	20May83				
Lower Snake Rvr FAW Comprehen- sive Plan, WA & ID	FAML	5Jul83	NA	NA							
McMary Ldb, 2nd Pwrhse, OR & WA (PH)	HYD	30Nov79	2Apr80	6May80	20Aug80	16Jan81	24Jun81	1Jul81			
Wynoochee Hydro/Fish Hatchery, WA	HYD	24Sep82	3Mar83	23Mar83	27May83	18Jul83	18Aug83				

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BIR/MIC ACTION	DATE OF BIR/MIC REPORT	DATE OF ST & AG ST CHTS	DATE OF INT CRT	DATE OF CDE RPT	DATE TO SA FOR OMB	DATE TO OMB LTR DATE	DATE TO DATE TO CONGRESS	REMARKS
OHIO RIVER Fairfield, OH	FIP	26Apr82	25Sep82	25Oct82	19Nov82	10Feb83	22Jun83	27Jul83			
Hocking Rvr at Logan & Wisconsinville, OH	FIP	15Jan77	3May77	3May77	25Jul77	21Oct77	23Jan78	28Jun78	22Aug83	82Jan84	
Scioto Rvr, N. Chillicothe, OH	FIP	27Sep80	19Feb81	27Mar81	27Apr81	4May81	22Jun81	4Sep81	17Dec81		
Miami Rvr, N. Carrollton-Holers, OH	FIP	23Oct80	19Feb81	13Apr81	15May81	6Jun81	29Jul81	23Dec81	20Sep83	22Dec83	
Cabin Cr, Kanawha Co, WV	FIP	19Aug77	17Jan78	17Jan78	25May78	15Sep78	14Oct78	1Mar79	7Mar79	27Jul83	
Baltimore L&D Rapi, OH & WV (PH)	MW	4May81	9Sep81	15Oct81	16Dec81	2Mar82	8Apr82	14Apr82			
Monongahela L&D 748, WV	HYD	6Jan84					15Aug83	18Aug83			
PACIFIC OCEAN Apra Har, GU	MW	2May83									Returned to FGA 30ec83
Alensio Strs, HI	FIP	15Jul82	14Dec82	18Jan83	17Feb83	26Apr83	15Aug83	26Aug83			
Hilo Har, HI	MW	24Feb82	28Jun83	18Jul83	9Sep83	18Oct83	9Nov83				
Lava Flow Control, HI	FIP	30May80	19Nov80	15Dec80	17Feb81	22Apr81	10Jun81	21Jul81	24Jul81	13Dec83	
Bailua Rvr Hydro, HI	HYD	30Dec82	27Jun83	18Jul83	9Sep83	4Oct83	17Nov83				
SOUTH ATLANTIC Noshie Har, AL	MW	6Nov80	18Feb81	18Mar81	21Apr81	30Jun81	17Jul81	18Nov81	9Dec81		
Oliver L&D, AL		17Aug83	1Dec83								
Tennessee-Tombigbee Waterway, FMH Hightstown, AL & MS	FAM	19Sep83									Sch for BERM Rtg No 1/84
Three Mile Cr, AL	FIP	7Feb83	28Jun83	18Jul83	22Sep83	31Jan84	13Dec83				
Village Cr, AL	FIP	21Sep81	8Mar82	5Apr82	28May82	13Oct82	16Sep82	23Dec82	7Jan83	64Jun83	24Oct83

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRI/MRC ACTION	DATE OF BRI/MRC REPORT	DATE OF ST & AG ST CRIS	DATE OF INT CRT	DATE OF COE RPT	DATE TO DATE FOR DND	DATE TO DND CRT LTR DATE	DATE TO DATE FOR CONGRESS	REMARKS	
Charlotte Co, FL	SP	22Dec80	13May81	29Jun81	27Jul81	25Jan82	27Oct81	28Apr82	13Apr82	22Jun83	50Oct83	
Dade Co, FL	SP	11Aug82	14Dec82	19Jan83	4Mar83	3May83	21Jun83	23Dec83				
Indian Rvr Co, FL	HUB											
Jacksonville Hbr, Hill Cove, FL	SP	31Oct80	18Feb81	12Mar81	11May81	10Aug81	21Dec81	8Jan82	8Jan82	23Jun83	19Oct83	70Dec83
Manatee Hbr, FL	NAV	60Oct80	13May81	29Jun81	27Jul81	22Dec81	6Nov81	12Feb82	1Mar82	16Jun83	4Nov83	
Monroe Co, FL	NAV	16Feb79	31Jul79	21Aug79	14Sep79	30Jan80	26Dec79	12May80	19May80	4Feb82	9May83	20May83
	SP	28Apr82	27Jun83	18Jul83	21Sep83	18Jan84	9Dec83					
St. Johns Co, FL	SP	24Apr78	21Mar78	26Apr79	15May79	27Nov79	10Aug79	26Feb80	29Feb80	8Apr83		
Metro Atlanta M.R.H.S., GA	MS	30Mar81	9Sep81	28Oct81	9Dec81	18Feb82	30Mar82	13Jun82	17Jun82	22Oct82		
MTD								73Feb83	12Oct83			
Savannah Rvr, Oates Cr, GA	FDP	31Dec80	13May81	29Jun81	29Jul81	19Nov81	9Nov81	23Oct81	19Jan82	27May83	19Oct83	80Dec83
Wilmington Hbr, NE Cape Fear, NC	NAV	8May78	14Nov79	23Jan80	24Jan80	30May80	26Jun80	16Sep80	30Sep80	18May83	22Dec83	
Wrightsville Beach, NC	SP	30Dec82	2Mar83	23Mar83	15Jun83	20Sep83	26Sep83	19Dec83	11Jan84			
San Juan Hbr, PR (PHI)	NAV	24Aug81	8Mar82	20Apr82	28May82	15Sep82	11Aug82	23Oct82	19Jan83	23Jun83	1Aug83	85Sep83
Charleston Hbr, SC (PHI)	NAV	25Jun80	19Nov80	21Jan81	26Feb81	5Jun81	14Jun81	27Aug81	18Sep81	27May83	1Aug83	85Sep83
Folly Beach, SC	SP	31Dec79	3Apr80	30Apr80	30Jun80	10Dec80	24Oct80	17Mar81	31Mar81	3Jan84		
Crown Bay, VI	NAV	29Oct80	13May81	10Jul81	29Jul81	16Feb82	5Nov81	9Apr82	20Apr82			
SOUTH PACIFIC												
Little Colorado Riv at Holbrook, AZ	FDP	31Dec80	13May81	29Jun81	22Jul81	28Sep81	9Oct81	23Oct81	8Jan82			
Cache Cr Bsn, CA	FDP	26Oct79	3Apr80	4Jan80	2Jul80	3Sep80	22Oct80	27Apr81	15May81	6Jun83	50Oct83	8Nov83
Fisherman's Wharf, CA	NAV	23Jun76	11Apr77	11Apr77	31May77	30Oct77	19Sep77	3Feb78	27Jun79	8Apr83	1Aug83	29Aug83
							72Jun79					NO 98-122

REPORT NAME BY DIVISION	TYPE	DATE OF DIV CDR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE TO ST & AG ST CMTS	DATE OF JMT CMT ST CMTS	DATE OF COE RPT	DATE TO SA FOR OMB	DATE TO OMB LTR DATE	DATE TO OMB CMT DATE FOR CONGRESS	DATE TO CONGRESS	REMARKS
Parker Lake, Muddy Boggy Cr., OK	FDP	14May76	29Sep76	2Nov76	23Mar77	20May77	3May77	30May80	9Jun80			
M.D. Mayo L&D 14 Hydro, OK	HYD	19Dec80	13May81	5Jun81	9Jul81	15Sep81	8Oct81	23Dec81	19Jan82	26Jun83	20Dec83	
Brasos Is Hdr, TX	NAV	13Feb78	21Jun78	3Nov78	27Dec78	10Jul79	25Apr79	20Dec79	31Dec79	4Feb82	1Aug83	4Oct83
Colorado Rvr & Tribs, Boggy Cr., TX	FDP	10Dec79	2Apr80	30Apr80	11Jun80	15Oct80	21Aug80	19Jan81	4Feb81			Returned by SA 20May83
Cooper Lake and Chilis Mlt, TX	FAML	22Apr81	9Sep81	19Oct81	4Nov81	4Jan82	25Jan82	21May82	1Jun82			DE notice not issued
Lake Wichita, Holliday Cr, TX	FDP	23Dec76	18Jan78	19May78	18Aug78	9Apr79	7Nov78	9Jul79	17Jul79	31Mar83		
Lower Rio Grande Bsn, TX	FDP	20Sep82	28Apr83	29Apr83	6Jul83		13Oct83					
Sias Bayou, TX	FDP	21Mar83	27Jun83	18Jul83	6Sep83	10Jan84	12Dec83					
Texas City Chol, TX	NAV	27Sep82	14Dec82	19Jan83	24Feb83	9Jun83	13May83					
Trinity Rvr Project Mlt, TX	FAML	16Oct81	25Sep82	4Oct82	9Nov82	17Mar83	25Jan83					

WASHINGTON LEVEL PROCESSING OF REPORTS NOT RECOMMENDING FEDERAL ACTION

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRH/MRC ACTION	DATE OF BRH/MRC REPORT	DATE OF ST & AG ST CMTS	DATE OF INT CMT	DATE OF CODE RPT	DATE SA FOR OMB & CONG	DATE TO DATE TO OMB CONGRESS	REMARKS
LOWER MISSISSIPPI VALLEY Depogonia & Fountain Bluff Delt, IL	FDP	15Nov82	12Apr83	12Apr83	12May83	21Oct83	28Jul83			
Great Ill, MO & IL	MP	8Dec82	21Mar83	21Mar83	19Apr83	10Aug83	13Jul83	10Nov83	22Nov83	
Mississippi Rvr (adequate floor- ing facilities), MO & IL	NAV	17Dec82	23Mar83	23Mar83	N/A	N/A	N/A	22Jul83	8Nov83	23Nov83
MISSOURI RIVER										
Metro Sioux City & Missouri Rvr, IA, NE & SD	URB	28Oct81	30Apr82	30Apr82	26May82	19Aug82	13Aug82	26Jan83		
Neaha & Little Neaha Rvr & Trib, NE & KS	FDP	23Jun83	9Aug83	9Aug83	25Sep83	31Oct83	18Dec83	24Jan84		
NORTH ATLANTIC										
Retro Area Water Supply Study, MD, VA & DC	MS	25Sep83	20Oct83	20Oct83	5Dec83	16Dec83				
Rahway, NJ	FDP	8Jul81	15Aug81	20Aug81	17Sep81	None	17Nov81	25Sep82		
Reepstead Hbr, NY	NAV	1Jun81	25Sep82	20Sep82	13Oct82	16Dec82				
Wallkill Rvr Bsn, NY & NJ (PHI)	FDP	24Nov82	8Apr83	8Apr83	5May83	4Aug83	17Jun83	25Jan84		
Westchester Co Strss, NY (Final)	FDP	10Sep81	3Nov81	3Nov81	4Dec81	22Dec81	22Feb82	25Sep82		
Delaware Salinity Intrusion Study, PA, MD, DE	MS	28Jan83	12Apr83	12Apr83	20Jul83	16Aug83	29Sep83			
Chowan River, VA & NC	FDP	7Nov83	16Jan84	16Jan84						
NORTH CENTRAL										
Iowa & Cedar Rvr Bsn, IA	FDP	10Sep82	11Apr83	11Apr83	15Jun83	26Sep83				
Rock Rvr at Rockford, IL (Final)	FDP	7Oct81	8Dec81	8Dec81	20Jan82	None	19Mar82	5Nov82		

REPORT NAME BY DIVISION	TYPE	DATE OF DIV COR NOTICE	DATE OF BRH/MC ACTION	DATE OF BRH/MC REPORT	DATE TO ST & HB ST CMTS	DATE OF INT CMT	DATE OF CDE RPT	DATE SA FOR OHB & CONG	DATE TO CONGRESS	REMARKS
Great Lks/St. Lawrence SM Nav Seas. Est., N.Y., N.Y. (Final)	NAV	31Dec79	9Feb81	18Mar81	23Jul81	28Dec81	10Dec81	3Mar82	9Apr82	
Great Rvr Nrc Regt Study, Int on Great L & H, N.Y., N.Y., N.Y.	NP	31Jul81	9Mar82	26Apr82	27May82	31Aug82	25Aug82	19Apr83	13May83	
Mississippi Rvr Headwaters Lakes to OH	FDP	12Nov82	22Apr83	22Apr83	13May83	23Jun83	24Aug83	24Jan84		
Poebina River, MO	FDP	30Nov83								
Lake Erie NW Regt Study, PA, NY & OH	MNH	30Dec82	28Feb83	28Feb83	22Apr83	19May83	24Jun83			
NEW ENGLAND Housatonic Rvr Ben Up Study, MA & CT	URB	27Sep82	8Feb83	8Feb83	9Mar83	28Jun83	19May83			
SOUTH ATLANTIC Volusia County Shores, FL	SP	29Jul83	27Dec83	27Dec83	30Jan84					
Hithlacochie W.R.S.S., FL	MS	17Dec82	4Apr83	4Apr83	29Apr83	26Jul83	13Jul83	22Nov83	12Dec83	9Jan84
Metro Savannah, GA	URB	30Dec83								
Bogue Banks & Bogue Inlet, NC	SP	30Dec83								
Carolina Beach Inlet, NC	NAV	6Jun83	15Aug83	15Aug83	7Sep83		15Dec83			
SOUTH PACIFIC Gallona Cr & Tribs, CA	FDP	11Mar83	29Apr83	29Apr83	9Jun83	17Aug83	17Aug83	24Jan84		
Crescent City Mbr (Shoaling), CA	NAV	27Jun83	15Aug83	15Aug83	8Sep83	30Dec83	16Dec83			
San Lorenzo Rvr, CA	FDP	11Mar83								Rpt recalled by FOR Nov83

CWP-1

WASHINGTON LEVEL REPORTS
RECOMMENDING FEDERAL ACTIONS FOR WRDA 1984

CURRENT STATUS

Status	No. Reports	No. Projects	First Cost (\$000)

WITH:			
Congress-Transmitted	43	44	1329375
Congress-Informed	6	6	48424
Cleared by OMB	17	18	998714
OMB	18	18	835177
ASA(CW)	40	42	6341211
Preparing Final Rpt Supplement	8	8	148658
	-----	-----	-----
Subtotal	132	136	9701559
With or in Chain to Chief	0	0	0
Preparing Final Chiefs Report	17	17	655019
States & Agencies	7	11	805358
Chief for States & Agencies	9	9	217421
BERH/MRC Acted, Report Pending	2	2	114562
BERH for Mar 1984 Mtg or Later	8	9	301062
	-----	-----	-----
Subtotal	43	48	2093422
GRAND TOTAL	175	184	11794981

END OF REPORT CWP-1

CWP-2

STATUS OF CHIEFS REPORTS RECOMMENDING FEDERAL ACTION
SORTED BY DATE OF LATEST MILESTONE

STATUS/ TITLE OF REPORT	DATE OF COE RPT	DATE TO OMB	DATE TO CONGRESS	TOTAL COST (\$000)	HOUSE/ SENATE DOC. NO
A. ASA TRANSMITTED REPORT TO CONGRESS					
1. Jekyll Island, GA	3Mar76	16Mar76	15Jun76	10015	HD94-533
2. Atlantic Intracoastal Waterway Bridges, NC	1Oct75	14Apr76	25Aug76	8600	HD94-597
3. Trimble Wildlife Area Replace- ment, Smithville Reservoir, MD	22Sep77	4Nov77	19Sep78	7770	HD95-389
4. Blair & Sitcum Waterways, Tacoma Harbor, WA	8Feb77	11Mar77	1Nov78	33130	HD96-26
5. Sawmill Run, Pittsburgh, PA	30Jan78	1Jun78	8Nov78	7550	HD96-25
6. Root River Basin, MN	13May77	15Jul77	20Nov78	8690	HD96-17
7. Agana River, GU	14Mar77	19Apr77	20Nov78	9250	HD96-16
8. Chehalis River-S. Aberdeen & Cosopolis, WA	8Feb77	23Mar77	20Nov78	20890	HD96-27
9. Kodiak Harbor, AK	7Sep76	16Nov76	24Nov78	13966	SD96-6
10. Little Wood River, Gooding & Shoshone, ID	2Nov77	30Nov77	27Nov78	4234	SD96-9
11. Rahway River & Van Winkles Brook, Springfield, NJ	24Oct75	9Feb77	27Nov78	16800	HD96-20
12. Coney Island Area, Norton Point, NY	18Aug76	7Sep76	27Nov78	6600	HD96-23
13. Gulfport Harbor, MS (PHI only)	16Jan78	27Feb78	28Nov78	0	HD96-18; SD96-8
14. Libby Reregulation Pwr Units, MT (PHI)	18Jul77	5Oct77	12Dec78	76000	HD96-19
15. Rahway River Basin, Robinson's Branch, Rahway, NJ	10Oct75	9Feb77	12Dec78	18600	HD96-21
16. Panama City Beaches, FL	8Jul77	29Sep77	7Feb79	41397	HD96-65; SD96-18
17. Zumbro River, Rochester, MN (PHI)	23Feb79	8Mar79	27Apr79	92100	HD96-115
18. Muskingum River Basin, Kill- buck, OH	3Feb78	4Dec78	27Apr79	6174	HD96-117
18. Muskingum River Basin, Mans- field, OH	3Feb78	4Dec78	27Apr79	4710	HD96-117
19. Buffalo Metro Area, NY (Caze- novia Creek)	8Sep77	11Dec78	1May79	2550	HD96-126; SD96-37
20. Des Moines River Basin, IA & MN	22Jul77	11Dec78	31May79	15020	HD96-146; SD96-36
21. Upper White Oak Bayou, TX	13Jun78	15Dec78	3Aug79	85246	HD96-182
22. Davenport, IA (SPAC)	9Jul79	4Feb82	19Jul82	487	HD97-218
23. Richard B. Russell Dam & Lake Mitigation, GA & SC	11May82	24May82	15Sep82	19237	HD97-244
24. Tampa Harbor, East Bay Channel, FL	25Jan79	4Feb82	30Mar83	0	
25. Fourche Bayou, AR	4Sep81	13Oct82	31May83	29000	
26. Savannah Harbor Widening, GA	19Dec78	4Feb82	30Jun83	18327	HD98-82
27. Hudson River Water Supply (NEWS) Study (PHI Only)	28Mar79	14Apr83	23Aug83	0	HD98-107
28. Mamaroneck, Sheldrake & Byram River Basins, NY & CT	4Apr79	26Apr83	2Sep83	60580	HD98-112

STATUS/ TITLE OF REPORT	DATE OF COE RPT	DATE TO OMB	DATE TO CONGRESS	TOTAL COST (\$000)	
<u>A. ASA TRANSMITTED REPORT TO CONGRESS (Cont)</u>					
29. Yakima River at Yakima & Union Gap, WA	7May80	11Apr83	19Sep83	8885	
30. Rock River at Rockford, IL	15Sep80	22Apr83	40Oct83	29170	HD98-121
31. Sacramento River, Deep Water Ship Channel, CA	20Nov81	3Jun83	40Oct83	101600	
32. Brazos Island Harbor, TX	20Dec79	4Feb82	40Oct83	28319	
33. Charleston Harbor, SC (PHI)	27Aug81	27May83	40Oct83	83200	
34. Susquehanna River at Harris- burgh, PA	16May79	8Apr83	50Oct83	127000	HD98-123
35. New Haven Harbor, CT	26Jul82	27May83	50Oct83	24700	
36. Gowanus Creek Channel, NY	14Sep82	27May83	70Oct83	3300	
37. San Juan Harbor, PR (PHI)	23Dec82	2Jun83	70Oct83	80093	
38. Cache Creek Basin, CA	27Apr81	6Jun83	8Nov83	29300	HD98-134
39. Redbank and Fancher Creeks, CA	7May81	26Aug83	17Nov83	81300	
40. Puerco River & Tribs, Gallup, NM	4Sep81	3Jun83	5Dec83	4000	
41. Dates Creek, Savannah River, GA	23Dec81	27May83	14Dec83	12894	
42. Indian River County, FL	21Dec81	2Jun83	20Dec83	4891	
43. James River, Richmond, VA (PHI)	16Nov81	8Jul83	21Feb84	93800	
			SUBTOTAL	1329375	
<u>B. ASA INFORMED CONGRESS - REPORT NOT TRANSMITTED</u>					
1. Louisiana State Penitentiary, Mississippi River, LA	10Dec82	6Jun83	3Aug83	21671	
2. Dicot Harbor, NY	11Jun80	11Apr83	22Feb84	11806	
3. Mississippi River, Green Bay Levee & Drain Dist No. 2, IA	21Oct81	13Jun83	22Feb84	6620	
4. Charlotte Co, FL	2Apr82	22Jun83	22Feb84	2237	
5. Lava Flow Control, HI	21Jul81	13Dec83	24Feb84	4880	
6. Lake Pontchartrain, Mo. Shore, LA	14Feb79	2Dec83	28Feb84	1210	
			SUBTOTAL	48424	
<u>C. CLEARED BY OMB</u>					
1. Manatee Harbor, FL	12May80	4Feb82		14950	
2. Norfolk Harbor & Channels, VA	20Nov81	25May82		499000	
3. Wilmington Harbor, NE Cape Fear River, NC	16Sep80	18May83		9567	
4. Fountain Creek, Pueblo, CO (PHI)	23Dec81	3Jun83		7820	
5. Village Creek, AL	23Dec82	6Jun83		27500	
6. Redwood River at Marshall, MN (Sec 216)	16Nov81	9Jun83		4177	
7. Presque Isle Peninsula, PA (PHI)	20Oct81	10Jun83		27300	
8. Southcentral Railbelt, Valdez, AK	29Oct82	14Jun83		41700	
9. Jacksonville Harbor, Mill Cove, FL	12Feb82	16Jun83		6100	

STATUS/ TITLE OF REPORT	DATE OF CDE RPT	DATE TO OMB	DATE TO CONGRESS	TOTAL COST (\$000)
<u>C. CLEARED BY OMB (Cont)</u>				
10.W.D. Mayo Lock & Dam 14 Hydro, OK	23Dec81	20Jun83		112100
11.Murray Lock & Dam Hydro, AR	23Dec81	28Jun83		92900
12.Hocking River at Logan, OH	23Jun78	22Aug83		7490
12.Hocking River at Nelsonville, OH	23Jun78	22Aug83		7730
13.Perry Creek, IA	4Feb82	19Sep83		42400
14.Horn Lake Creek, TN & MS (PHI)	4Jan83	20Sep83		3240
15.Niami River Basin, Holes Creek, OH	23Dec81	20Sep83		8840
16.Lock Haven, PA (PHI)	14Dec81	14Nov83		75800
17.Raritan River Basin, Green Brook Sub-basin, NJ	4Sep81	14Nov83		10100
			SUBTOTAL	998714
<u>D. WITH OMB</u>				
1.Lucky Peak, ID	17Mar80	4Feb82		101300
2.Oakland Outer Harbor, CA	7Jan80	4Feb82		42400
	1Jul83s			
3.Grand Haven Harbor, MI	9Oct79	11Feb82		18179
4.Metro Atlanta W.R.M.S., Lake Lanier Reregulation Dam, GA	1Jun82	22Oct82		25234
	7Sep83s			
5.Lake Wichita, Holliday Creek, TX	9Jul79	31Mar83		25300
6.St. Johns County, FL	26Feb80	8Apr83		9584
7.Bonneville Navigation Lock, MA & OR	14Mar80	19Apr83		182019
	10Feb81s			
8.Atlantic Coast of MD & Assateague Island, VA	29Sep81	27May83		33700
9.Monroe Harbor, MI	25Nov81	9Jun83		154913
10.Quincy Coastal Streams, Town Brook, MA	14Dec81	13Jun83		19800
11.Cabin Creek, Kanawha Co, WV (Demo Reclamation Proj)	1Mar79	27Jul83		42000
12.Sacramento Rvr Fish & Wildlife Program, CA	1Sep81	25Aug83		1361
	2Jun83s			
13.Metro Denver & S. Platte Rvr (Westerly Cr), CO, WY & NE	23Dec81	16Dec83		10096
	14Jul83s			
14.Folly Beach, SC	17Mar81	3Jan84		3302
15.Mingo Creek, Tulsa, OK	16Nov81	11Jan84		117000
16.Eight Mile Cr, AR	10Aug79	17Jan84		14750
17.Crown Bay, St. Thomas, VI	9Apr82	19Jan84		7537
18.White River Navigation to Batesville, AR	23Dec81	9Feb84		26500
			SUBTOTAL	835177
<u>E. WITH ASA</u>				
1.Greenville Harbor, MS (PHI)	15Nov77	9Jun78		40500
	22Feb82s			

STATUS/ TITLE OF REPORT	DATE OF COE RPT	DATE TO OMB	DATE TO CONGRESS	TOTAL COST (\$000)
<u>E. WITH ASA (Cont)</u>				
2. Vicksburg Harbor, MS	13Aug79			73900
3. Bushley Bayou, Red River, LA (PHI)	30Apr80			42700
4. Parker Lake, Muddy Boggy Creek, OK	12Aug82s 30May80			43842
5. West Kentucky Tribs, Obion Creek Mitigation Plan, KY	16Sep80			4900
6. Phillips Co, Helena Hbr, AR	17Oct80			55400
7. Memphis Harbor, TN	25Feb81			105700
8. McNary Lock & Dam, 2nd Powerhouse, OR & WA (PHI)	24Jun81			616000
9. Mobile Harbor Deepening, AL	18Nov81			468933
10. Kill Van Kull, Newark Bay Channels, NY & NJ	14Dec81			236600
11. Downstream Measures at Harry S. Truman Dam & Reservoir, MO	21Dec81			2000
12. Cape May Inlet to Lower Township, NJ (PHI)	23Dec81			16200
13. Santa Ana River Main Stem, Incl Santiago Creek, CA (PHI)	15Jan82			1379000
14. Gallipolis Locks & Dam Repl, OH & WV (PHI)	8Apr82 13Aug83s			270000
15. Cooper Lake and Channels Miti- gation, TX	21May82			13760
16. Richmond Harbor, CA	8Aug82			57600
17. Maline Creek, MO	2Nov82			60700
18. Brush Creek & Tribs, MO & KS	3Jan83			15070
19. St. Johns Bayou & New Madrid Floodway, MO (PHI)	4Jan83			106100
20. Atchafalaya Basin Floodway System, LA	28Feb83			250240
21. Big River Reservoir, RI	9Mar83			80900
22. Mississippi River Ship Chnl, Gulf to Baton Rouge, LA	9Apr83			525000
23. Gregory County Hydro Pumped Storage Facility, SD	26Apr83			1220000
24. Mississippi River at St. Paul, MN (Sec 216)	16Jun83			8975
25. Helena & Vicinity, AR	22Jun83			13300
26. Fairfield, OH	22Jun83			13730
27. Bethel Bank Stabilization, AK	30Jul83			15150
28. Scammon Bay Small Hydro, AK	9Aug83			1500
29. Blue River Lake, OR	9Aug83			29400
30. Saint Paul Island Harbor, AK	10Aug83			23100
31. Alenaio Stream, HI	15Aug83			7010
32. Arkansas River & Tribs, L&D 9, AR & OK	1Sep83			97100
32. Arkansas River & Tribs, L&D 13, AR & OK	1Sep83			107000
32. Arkansas River & Tribs, Toad Suck Ferry, AR & OK	1Sep83			56200

STATUS/ TITLE OF REPORT	DATE OF COE RPT	DATE TO OMB	DATE TO CONGRESS	TOTAL COST (\$000)
<u>E. WITH ASA (Cont)</u>				
33. Fry Creeks, Tulsa, OK	7Sep83			11700
34. Wyoming Valley, PA (PHI)	19Oct83			224800
35. Hampton Roads Drift Removal, VA	19Oct83			6560
36. Indiana Shoreline, IN	18Nov83			7760
37. Upper Little Arkansas River Watershed, KS	15Dec83			11920
38. Wrightsville Beach, NC	19Dec83			717
39. Dade County, N. of Haulover Beach, FL	27Dec83			8847
40. South Quincy Drainage & Levee District, IL	24Jan84			11397
			SUBTOTAL	6341211
<u>F. PREPARING FINAL REPORT SUPPLEMENTS</u>				
1. Halstead, KS	8May79			7500
2. Colorado River & Tribs, Boggy Creek, TX	19Jan81			19400
3. Middle Rio Grande Flood Prot, Bernalillo to Belen, NM	23Jun81			41300
4. Scioto River, N. Chillicothe, OH	4Sep81			11200
5. Little Colorado River at Holbrook, AZ	23Dec81			10588
6. Barnegat Inlet, NJ (PHI)	20Jan83			33370
7. Nonconnah Creek, TN & MS (PHI)	23Dec82			25300
8. City Waterway, Tacoma Harbor, WA	5May83			0
			SUBTOTAL	148658

CWP-3

STATUS OF FIELD & BERH/MRC REPORTS RECOMMENDING FEDERAL ACTION
 SORTED BY DATE OF LATEST MILESTONE

STATUS/ TITLE OF REPORT	DATE OF PUBLIC NOTICE	DATE OF BERH/MRC ACTION	DATE OF BERH/MRC REPORT	DATE TO STATES & AGENCIES	TOTAL COST (\$000)*
<u>G. WITH OR IN CHAIN TO CHIEF</u>					
---NO REPORTS IN THIS CATEGORY---					
<u>H. PREPARING FINAL CHIEFS REPORT</u>					
1. Trinity River Project Mitigation, TX	16Oct81	2Sep82	4Oct82	9Nov82	6760
2. Missouri River Bank Stab & Nav Mitigation, IA, NE, MO, KS	15Jun81	2Sep82	30Sep82	18Nov82	49400
3. Dresden Lock & Dam Hydro, IL	23Jul82	15Dec82	18Jan83	11Feb83	22800
4. Brandon Road Lock & Dam Hydro, IL	23Jul82	15Dec82	18Jan83	23Feb83	13800
5. Texas City Channel, TX	27Sep82	14Dec82	19Jan83	24Feb83	171520
6. Grays Harbor, WA	15Sep82	14Dec82	17Jan83	2Mar83	88547
7. Yazoo River Mitigation, MS	16Aug82	16Dec82	16Dec82	28Mar83	4993
8. St. Louis Harbor, MO & IL	29Nov82	3Mar83	6Apr83	19May83	29740
9. Wynoochee Hydro/Fish Hatchery, WA	24Sep82	3Mar83	23Mar83	27May83	45060
10. Duluth-Superior Harbor, MN & WI	5Nov82	2Mar83	4Apr83	7Jun83	13289
11. Sims Bayou, TX	21Mar83	27Jun83	18Jul83	6Sep83	111413
12. Hilo Harbor, HI	26Feb82	28Jun83	18Jul83	9Sep83	3820
13. Mailua River Hydro, HI	30Dec82	27Jun83	18Jul83	9Sep83	12250
14. East, West & Duwamish RRs, WA	20Apr83	28Jun83	18Jul83	9Sep83	54650
15. Monroe County, FL	28Apr82	27Jun83	18Jul83	21Sep83	3117
16. Willoughby Spit & vic, VA	1Apr83	27Jun83	8Aug83	23Sep83	3410
17. Park River, Grafton, ND	28Feb83	27Jun83	18Jul83	1Nov83	18450
				SUBTOTAL	655019
<u>I. PROPOSED CHIEFS REPORT WITH STATES & AGENCIES</u>					
1. Lower Rio Grande Basin, TX	20Sep82	28Apr83	29Apr83	6Jul83	180631
2. Ft. Gibson Lake, Powerhouse Extension, OK	11Mar83	27Jun83	18Jul83	6Sep83	23200
3. Threemile Creek, AL	7Feb83	28Jun83	18Jul83	22Sep83	17780
4. Little Calumet River, IN (PHI)	12Oct82	28Sep83	14Nov83	16Jan84	39271
5. Centralia-Chehalis, WA	11Apr83	28Sep83	18Oct83	18Jan84	18600
6. Arkansas River & Tribs Hydro, L&D 2, AR	7Jul83	28Sep83	18Oct83	18Jan84	139076
6. Arkansas River & Tribs Hydro, L&D 3, AR	7Jul83	28Sep83	18Oct83	18Jan84	92200
6. Arkansas River & Tribs Hydro, L&D 4, AR	7Jul83	28Sep83	18Oct83	18Jan84	78700
6. Arkansas River & Tribs Hydro, L&D 5, AR	7Jul83	28Sep83	18Oct83	18Jan84	92300
6. Arkansas River & Tribs Hydro, David D. Terry L&D, AR	7Jul83	28Sep83	18Oct83	18Jan84	92700
7. Buffalo Metro Area, NY (Tonawanda Creek)	30Jul82	28Sep83	19Oct83	25Jan84	30900
<u>J. PROPOSED REPORT IN OCE FOR STATES & AGENCIES</u>					
1. Lower Snake River F&M Comprehensive Plan, WA & ID	5Jul83	MA	MA		0
2. West Memphis & vic, AR	30Dec82	25Apr83	25Apr83		19900
3. Starved Rock Lock & Dam Hydro, IL	29Mar83	27Jun83	18Jul83		30500
4. Lock & Dam 26 Hydro, IL	21Mar83	27Jun83	8Aug83		30700
5. North Branch Chicago River, IL (PHI)	7Sep83	1Dec83	3Jan84		14257
6. Sheyenne River, ND	25Apr83	1Dec83	23Jan84		39600
7. Roughans Point, Revere, MA	3Jan83	1Dec83	24Jan84		8700
8. Maumee Bay State Park, OH	30Aug83	1Dec83	26Jan84		12164
9. Mississippi River Hydro, L&D 14, IL & IA	14Sep83	1Dec83	31Jan84		61600
				SUBTOTAL	217421

STATUS/ TITLE OF REPORT	DATE OF PUBLIC NOTICE	DATE OF BERH/MRC ACTION	DATE OF BERH/MRC REPORT	DATE TO STATES & AGENCIES	TOTAL COST (\$000)
----------------------------	-----------------------------	-------------------------------	-------------------------------	---------------------------------	--------------------------

K. FIELD REPORT ACTED UPON BY BERH/MRC, REPORT PENDING

1. Casino Beach, Illinois Shore- line, IL	27Apr83	1Dec83			5262
2. William Bacon Oliver Lock, AL	17Aug83	1Dec83			109300
				SUBTOTAL	114562

L. FIELD REPORT AT BERH/MRC UNDER REVIEW

1. Portsmouth Harbor & Piscataqua River, NH & ME	4Apr83				20750
2. Tennessee-Tombigbee Waterway, F&W Mitigation, AL & MS	19Sep83				25140
3. Red River Waterway, F&W Mitig- ation, LA	8Nov83				11165
4. Rarapago and Mahwah Rivers, NJ & NY	30Dec83				5900
5. Virginia Beach, VA (PHI)	30Dec83				41642
6. Monongahela River, Grays Landing L&D 7, PA	6Jan84				91960
6. Monongahela River, Point Marion L&D 8, PA	6Jan84				70740
7. Lorain Harbor, OH	27Jan84				7865
8. Cape Girardeau, MO	17Feb84				25900
				SUBTOTAL	301062

GRAND TOTAL 11794981

END OF REPORT CMP-3

INFLATION IMPACT

Chairman HATFIELD. The Committee would like you to provide tables showing the impact of inflation similar to that provided last year (see page 61 of last year's hearings).

General BRATTON. Yes, sir. (The information follows:)

TABLE I
CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1985
(Dollars in Millions)

ALL APPROPRIATIONS

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	1,293	1,293
1968	1,305	1,249
1969	1,246	1,124
1970	1,157	955
1971	1,310	1,002
1972	1,589	1,097
1973	1,952	1,190
1974	1,770	1,031
1975	1,757	927
1976	2,184 <u>1/</u>	1,074
1977	2,487	1,091
1978	2,784	1,148
1979	2,790	1,096
1980	3,263	1,185
1981	3,100	1,044
1982	3,002	946
1983	3,421	977
1984	2,649 (Estimate)	730
1985	2,724 (Budget)	707

1/ Without TQ (transition quarter)

TABLE II
CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1985
(Dollars in Thousands)

GENERAL INVESTIGATIONS

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	32,450	32,450
1968	34,445	31,332
1969	30,015	25,147
1970	41,191	31,183
1971	39,023	27,895
1972	50,714	33,116
1973	57,805	34,707
1974	56,142	32,180
1975	65,284	34,926
1976	66,836 <u>1/</u>	34,490
1977	71,920	32,227
1978	107,046	46,906
1979	137,978	56,296
1980	142,145	53,391
1981	134,013	46,659
1982	137,225	44,422
1983	139,042	40,811
1984	135,810 (Estimate) <u>2/</u>	38,134
1985	118,000 (Budget)	32,209

1/ Without TQ (transition quarter)
TQ = 17,110 = 8,829 (1965 Dollars)

2/ Reflects proposed transfer of \$+2 million

TABLE III
 CORPS OF ENGINEERS APPROPRIATIONS
 FY 1967 THROUGH FY 1985
 (Dollars in Thousands)
 CONSTRUCTION, GENERAL*

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	965,955	965,955
1968	967,599	921,523
1969	862,714	778,454
1970	711,992	587,058
1971	851,178	650,494
1972	1,025,084	703,844
1973	1,203,943	727,002
1974	873,589	503,399
1975	966,338	502,248
1976	1,237,151 <u>1/</u>	600,460
1977	1,430,195	618,436
1978	1,537,820	620,945
1979	1,343,711	507,796
1980	1,659,752	584,529
1981	1,593,892	516,469
1982	1,429,992	432,586
1983	1,508,405 <u>2/</u>	413,028
1984	889,304 (Estimate) <u>3/</u>	237,484
1985	874,000 (Budget)	218,006

* Excludes FC MR&T

1/ Without TQ

TQ = 412,741 = 200,327 (1965 Dollars)

2/ Includes \$180 million deferred in FY 1983 for use in FY 1984, and \$85 million Jobs Act Funds appropriated in FY 1983.

3/ Reflects proposed transfer of \$-4.8 million.

TABLE IV
CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1985
(Dollars in Thousands)

OPERATIONS AND MAINTENANCE, GENERAL

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	178,900	178,900
1968	193,00	190,532
1969	227,300	208,611
1970	261,824.9	222,986
1971	301,830.5	235,031
1972	388,519	274,604
1973	407,100	258,420
1974	426,625	258,822
1975	494,577	267,804
1976	582,073 <u>1/</u>	291,050
1977	667,600	300,217
1978	768,870	328,051
1979	833,100	343,600
1980	941,580	356,690
1981	967,905	342,250
1982	1,025,335	335,102
1983	1,201,367 <u>2/</u>	352,129
1984	1,184,492 (Estimate)	331,456
1985	1,297,000 (Budget) <u>3/</u>	344,350

1/ Without TQ

TQ = 153,116 = 76,562 (1965 Dollars)

2/ Includes \$164 million appropriated under Jobs Act

3/ Starting with FY 1985 this appropriation will include Special Recreation Use Fees, major rehabilitation initiated in FY 1985, and subsequently, recreation at completed projects.

TABLE V
CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1985
(Dollars in Thousands)

GENERAL EXPENSES

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	18,014	18,014
1968	19,515	18,586
1969	21,675	18,237
1970	25,356.6	19,483
1971	27,586.4	19,656
1972	29,723	19,982
1973	32,183	20,181
1974	35,083	21,903
1975	40,100	23,912
1976	43,700 <u>1/</u>	23,435
1977	49,050	24,501
1978	60,000	28,494
1979	68,900	30,838
1980	76,800	31,896
1981	86,630	32,706
1982	96,000	34,369
1983	100,100	31,775
1984	105,800 (Estimate) <u>2/</u>	32,032
1985	113,000 (Budget)	32,221

1/ Without TQ

TQ = 11,050 = 5,926 (1965 Dollars)

2/ Reflects proposed transfer of \$+2.8 million

TABLE VI
CORPS OF ENGINEERS APPROPRIATIONS
FY 1967 THROUGH FY 1985
(Dollars in Thousands)

FLOOD CONTROL, MISSISSIPPI RIVER
AND TRIBUTARIES

<u>Fiscal Year</u>	<u>Actual Appropriation</u>	<u>Value in July 1965 Dollars</u>
1967	87,135	87,135
1968	87,135	84,034
1969	69,600	63,973
1970	80,820	65,615
1971	83,987	63,731
1972	86,000	59,310
1973	111,620	66,051
1974	264,600	149,147
1975	120,051	61,060
1976	205,147 <u>1/</u>	100,614
1977	231,497	99,741
1978	253,081	101,340
1979	223,035	86,056
1980	210,515	77,129
1981	237,519	80,544
1982	256,310	81,341
1983	403,052 <u>2/</u>	116,171
1984	300,480 (Estimate)	82,069
1985	304,000 (Budget)	79,240

1/ Without TQ. TQ = 60,300 = 29,574 (1965 dollars)

2/ Includes \$140 million appropriated under Jobs Act.

NEW CONTRACT AWARDS

Chairman HATFIELD. Provide for the record the new contract awards of \$1 million or more planned in the last quarter of fiscal year 1984 and those proposed for fiscal year 1985.

General BRATTON. Yes, sir,

(The information follows:)

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

LOWER MISS VALLEY DIVISION

EST
AWARD
DATE

CONTRACT
AMOUNT
(\$000)

FY 1984
REQ'T
(\$000)

FY 1985
BALANCE
REQ'T
COMPLETE
(\$000)

DESCRIPTION OF WORK

CHANNEL IMPROVEMENT

ARCADIA POINT MS
BELOW RACETRACK MS
COTTONWOOD BAR MS TF MI 470 R
GRAND GULF-LOWER TF
HOGPOINT REVETMENT TRENCHFILL
ISLAND 84 AR-MS
LELAND BAR
MOORE IS, MO.
STOVE BANK PAVING

***** PROJECT TOTAL

LOCK & DAM 26 REPLACE

DAM 2ND STG
LOCK

***** PROJECT TOTAL

MISSISSIPPI RIVER LEVEES

CAIRO-MOUND CITY SEEPAGE CTRL
LAKE BOLIVAR BERM ITEM 570-L

***** PROJECT TOTAL

OUACHITA & BLACK RIVERS

PINE ISLD. ACCESS PT. (FELSENTHAL)

***** PROJECT TOTAL

RED RIVER WATERWAY, MISS. RIV. TO SHREVEPORT

DARROW REAL. & STAB. M123.5 (POOL 2) & LEVEE SETBACK
L&A RR BRIDGE ALEX M. 106.5 (POOL 2)

***** PROJECT TOTAL

YAZOO BASIN - BACKWATER

ROCKY BAYOU LEV IT 1

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
***** PROJECT TOTAL		5409	300	1200	4909
***** DIVISION TOTAL FOR		434468	8101	92764	333603
LOWER MISS VALLEY					

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
***** PROJECT TOTAL		2080	0	0	2080
***** DIVISION TOTAL FOR		2080	0	0	2080
MISSOURI RIVER					

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
***** PROJECT TOTAL		2028	377	662	989
***** DIVISION TOTAL FOR		2028	377	662	989
MISSOURI RIVER					

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
***** PROJECT TOTAL		3732	960	2772	0
***** DIVISION TOTAL FOR		3732	960	2772	0
MISSOURI RIVER					

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
***** PROJECT TOTAL		1205	200	379	626
***** DIVISION TOTAL FOR		1205	200	379	626
MISSOURI RIVER					

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
NEW YORK HARBOR COLLECTION & REMOVAL OF DRIFT, NY					
JERSEY CITY, NY	JUL 84	6130	330	2000	3800
***** PROJECT TOTAL		6130	330	2000	3800
***** DIVISION TOTAL FOR		6130	330	2000	3800
NORTH ATLANTIC					

NORTH CENTRAL

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'MT (\$000)	FY 1985 BALANCE REQ'MT COMPLETE (\$000)	DIVISION
BETTENDORF, IA					
STG 111B LEVEES AND BEAUTIFICATION B2 (MC)	SEP 84	5390	100	2350	2940
***** PROJECT TOTAL		5390	100	2350	2940
DAVENPORT, IA					
STG 1 WATER TREATMENT PLANT	SEP 84	1160	430	630	100
***** PROJECT TOTAL		1160	430	630	100
ELLCOTT CREEK					
STAGE 1 RELOCATIONS (MC)	JUL 84	1295	410	865	0
***** PROJECT TOTAL		1295	410	865	0
***** DIVISION TOTAL FOR		7845	940	3865	3040
NORTH CENTRAL					

NEW CONTRACT AWARDS, SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	EST AWARD DATE	NORTH PACIFIC	DIVISION
		CONTRACT AMOUNT (\$000)	FY 1984 REQ MT (\$000)
			FY 1985 REQ MT (\$000)
			BALANCE COMPLETE (\$000)
CHIEF JOSEPH ADDITIONAL UNITS			
POWER PLANT (TURBINE DEFICIENCIES)	SEP 84	19300	50
REC FACIL BRIDGEPORT STATE PARK PHASE II COMPLETION	SEP 84	1250	50
***** PROJECT TOTAL		20550	100
LOWER COLUMBIA RIV BASIN BANK PROTECTION, OR & WA			
BANK STABILIZATION JANICE, WARIS, ELLENDER RUSTY BUMPER & GI	SEP 84	1400	0
***** PROJECT TOTAL		1400	0
***** DIVISION TOTAL FOR		21950	100
			3250
			18600

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

OHIO RIVER DIVISION

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ.'MT (\$000)	FY 1985 REQ.'MT (\$000)	BALANCE COMPLETE (\$000)
BIG SOUTH FORK, KY & TN					
BLUE HERON OVERLOOK & CAMPGROUND	SEP 84	3077	100	1125	1852
***** PROJECT TOTAL		3077	100	1125	1852
LEVISA & TUG FORKS-BIG SANDY RIV & UPPER CUMBERLAND RIV					
BARBOURVILLE CUTOFF	JUL 84	6100	820	2008	3272
PINEVILLE INTERIOR PREPARATION	JUL 84	2219	423	1217	579
***** PROJECT TOTAL		8319	1243	3225	3851
SMITHLAND LOCKS & DAM, IL, IN & KY					
DYER CREEK DOAT RAMP	AUG 84	1089	75	650	364
***** PROJECT TOTAL		1089	75	650	364
STONEWALL JACKSON LAKE, WV					
EQUITABLE GAS CO. ACCESS ROADS-PHASE 2	JUL 84	3390	1400	1300	690
WV RT. 30 SEC 2 RELOCATION	JUL 84	10350	1700	3600	5050
WV RT. 30 SEC 3 RELOCATION	AUG 84	11600	500	2900	8200
***** PROJECT TOTAL		25340	3600	7800	13940
***** DIVISION TOTAL FOR		37825	5018	12900	20007

OHIO RIVER

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	EST AWARD DATE	SOUTH ATLANTIC	DIVISION
		CONTRACT AMOUNT (\$000)	FY 1984 REQ' MT (\$000) FY 1985 BALANCE REQ' MT COMPLETE (\$000)
B. EVERETT JORDAN DAM AND LAKE			
FISH & WILDLIFE FACILITIES	JUL 84	4006	400 1300 2306
***** PROJECT TOTAL		4006	400 1300 2306
CENTRAL AND SOUTHERN FLORIDA			
HERBERT HOOVER LEEVE REACH 5(PART) & REACH 6(PART)	SEP 84	3910	0 2295 1615
***** PROJECT TOTAL		3910	0 2295 1615
FALLS LAKE			
ROLLING VIEW RECREATION AREA	SEP 84	9458	0 3774 5684
***** PROJECT TOTAL		9458	0 3774 5684
PORTUGUES & BUCANNA RIVERS			
PORTUGUES DEGRIS BASIN EXCAVATION	SEP 84	7428	0 5500 1928
UPPER PORTUGUES CHANNEL SECTION 6D	SEP 84	2394	0 1500 894
***** PROJECT TOTAL		9822	0 7000 2822
***** DIVISION TOTAL FOR		27196	400 14369 12427
			SOUTH ATLANTIC

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1984 REQ'T (\$000)	FY 1985 REQ'T (\$000)	BALANCE COMPLETE (\$000)
CUCAMONGA CREEK, CA					
***** PROJECT TOTAL	JUL 84	2311	643	1668	0
DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA					
***** PROJECT TOTAL	JUL 84	2311	643	1668	0
COUNTY ROAD REPAIR 20 MILES RECREATION-BOAT LAUNCH RAMP					
***** PROJECT TOTAL	JUL 84	5000	1500	3000	500
NEW MELONES LAKE, CA					
***** PROJECT TOTAL	JUL 84	2000	400	1400	200
TUTTLETOWN MIN. RECREATION FACILITIES					
***** PROJECT TOTAL	JUL 84	7000	1900	4400	700
SACRAMENTO RIVER BANK PROTECTION PROJECT, CA					
***** PROJECT TOTAL	AUG 84	2100	700	1200	200
BANK PROTECTION, UNIT 38					
***** PROJECT TOTAL	AUG 84	2100	700	1200	200
SACRAMENTO RIVER, CHICO LANDING TO RED BLUFF, CA					
***** PROJECT TOTAL	JUL 84	1200	1200	0	0
BANK PROTECTION, UNIT 7					
***** PROJECT TOTAL	JUL 84	1200	1200	0	0
SAN FRANCISCO BAY TO STOCKTON, CA					
***** PROJECT TOTAL	JUL 84	2650	1650	1000	0
JERSEY ISLAND TO NEW YORK SLOUGH SOUTHAMPTON CHANNEL & RICHMOND LONG WHARF MANEUVERING AREA					
***** PROJECT TOTAL	JUL 84	2650	1650	1000	0
SHEETWATER RIVER, CA					
***** PROJECT TOTAL	AUG 84	2700	1850	850	0
RR BRIDGES & CHANNEL A2 CONTRACT					
***** PROJECT TOTAL	JUL 84	50660	35000	14200	32960
***** DIVISION TOTAL FOR	JUL 84	63360	5350	15050	32960
SOUTH PACIFIC					
***** PROJECT TOTAL	JUL 84	6625	1674	3728	1423
***** DIVISION TOTAL FOR	JUL 84	6625	1674	3728	1423
SOUTH PACIFIC					
***** DIVISION TOTAL FOR	JUL 84	75446	13117	27046	35283

NEW CONTRACT AWARDS SCHEDULED FOR THE FOURTH QUARTER OF FY 1984 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SOUTHWESTERN DIVISION

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME

DESCRIPTION OF WORK

EST
AWARD
DATE

CONTRACT
AMOUNT
(\$000)

FY 1984
REQ'T
(\$000)

FY 1985 BALANCE
REQ'T COMPLETE
(\$000)

ARCADIA LAKE, OK

LT ABUTMENT ACCESS RD & PROJ. BLDG. & OVERLOOK
PUBLIC USE AREAS, STAGE II-A

JUL 84
SEP 84

1003
2900

320 0 683 1142

***** PROJECT TOTAL

CORPUS CHRISTI SHIP CHANNEL

CONSTRUCT RETAINING WORKS FOR DREDGE MATERIALS (SUNTIDE AREA

SEP 84

7600

125 3590 3885

***** PROJECT TOTAL

JOE POOL LAKE

REC FAC PT 1

JUL 84

2073

200 1873 0

***** PROJECT TOTAL

RAY ROBERTS LAKE

MOPAC RAILROAD
ROAD A

SEP 84
SEP 84

10689
24474

275 25 4200 15049

***** PROJECT TOTAL

***** DIVISION TOTAL FOR

SOUTHWESTERN

30488 18141 456735

GRAND TOTAL ALL DIVISIONS

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

1
SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'MT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
ATCHAFALAYA BASIN, LA					
E-99 SHEETPILE	FEB 85	29580	3500	26080	
W-89.0 LEVEE ENLARGEMENT	OCT 84	14742	2700	12042	
***** PROJECT TOTAL		44322	6200	38122	
CHANNEL IMPROVEMENT					
BROWNS FIELD LA	SEP 85	1200	0	1200	
COMMERCE, MS	JUL 85	1300	1300	0	
COMMERCE, MS. (TF) JOBS BILL	JUN 85	1500	1500	0	
RIPRAP PAVING	SEP 85	1184	0	1184	
***** PROJECT TOTAL		5184	2800	2384	
EAST ST. LOUIS & VICINITY					
ITEM 3 DITCHING CONTRACT	OCT 84	1433	500	933	
***** PROJECT TOTAL		1433	500	933	
KASKASKIA RIVER NAVIGATION					
CANAL EX-REV MI 32.3-35.9	JAN 85	12174	309	11865	
***** PROJECT TOTAL		12174	309	11865	
LAKE PONCHARTRAIN					
CITRUS BK. LV. STA. 176-574, 3RD LIFT	OCT 84	2803	2080	723	
N.O.E. LKFT. LV PARIS RD. -SOUTHPT. FSP	APR 85	10948	2900	8048	
STA. 370-682 FINAL ENLOT. (CHALMETTE UNIT)	JAN 85	2185	1250	935	
***** PROJECT TOTAL		15936	6230	9706	
LARGSE TO GOLDEN MEADOW					
LARGSE FLOODWALL	APR 85	2110	530	1480	
SECT E SOUTH LV 1ST LIFT	OCT 84	3200	2000	1200	
***** PROJECT TOTAL		5310	2630	2680	
MISS R BTN OHIO MO REG WORK					
ELIZA. POINT CHANNEL REALINE PH-1	OCT 84	1150	550	600	

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ MT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
GREENFIELD BEND CHANNEL REAL. PH-1					
KASKASKIA BEND PH-1					
***** PROJECT TOTAL					
MISS. RIVER BATON ROUGE TO GULF					
BANK NOURISHMENT M. 1.4 R-4.0 R					
***** PROJECT TOTAL					
MISS. RIVER GULF OUTLET					
CHALMETTE AREA FORESHORE MRGO					
***** PROJECT TOTAL					
MISSISSIPPI RIVER LEVEES					
BARRACKS-MONTEGUT FW M 94.3-93.9-L					
CANAL TOULOUSE FLOODWALL PHASE II					
INDEPENDENCE IHNC FW					
STATELINE WILSON PT KY ITEM 501-R					
STATELINE WILSON PT KY ITEM 506-R					
STATELINE WILSON PT KY ITEM 503-R					
STELLA-BELAIR GPLO M72.2-66.0 L					
WATERPROOF BERM ITEM 385-R					
WILSON PT-PT LKOUT KY ITEM 489-R					
***** PROJECT TOTAL					
NEW ORLEANS TO VENICE					
LV 1ST LIFT STA. 314-681					
LV FINAL ENLOT. STA. 0-170					
LV FINAL ENLOT. STA. 373-635					
***** PROJECT TOTAL					
RED RIVER WATERWAY, MISS. RIV. TO SHREVEPORT					
GRAND BEND REAL & STAB (POOL 2) M. 94-98					
MONCLA REVET. (POOL 1)					
NORTH ACCESS RD (POOL 1)					

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'NT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
ONCE MORE WILSON CLS. (POOL 1) M. 76. 6-82.4	APR 85	4090	1748	2342	LOWER MISS VALLEY
***** PROJECT TOTAL		17176	6367	10809	
SARDIS LAKE DAM, MS					
BERM	AUG 85	8250	95	8155	
***** PROJECT TOTAL		8250	95	8155	
ST. FRANCIS RIVER & TRIBS.					
ITEM 2 BLACKFISH BAYOU	JUN 85	1719	200	1519	
ITEM 2 BIG CREEK	DEC 84	1870	400	1470	
STATE LINE OUTLET	MAY 85	3954	200	3754	
***** PROJECT TOTAL		7543	800	6743	
TENSAS BASIN (RED R BACKWATER EXC TENSAS-COUDRIE PP)					
SICILY ISLAND AREA ITEM 1B	OCT 84	4415	1800	2615	
***** PROJECT TOTAL		4415	1800	2615	
WEST TENNESSEE TRIBUTARIES					
FOWLKES IT 1, PART 2 SFFD 4.4-9.0	MAY 85	1819	900	919	
***** PROJECT TOTAL		1819	900	919	
YAZOO BASIN - UPPER PROJECTS					
CHANNEL ITEM NO. 2-B	OCT 84	2784	1144	1640	
***** PROJECT TOTAL		2784	1144	1640	
YAZOO BASIN TRIBUTARIES					
1 BRIDGE ITEM 2	OCT 84	2094	590	1504	
***** PROJECT TOTAL		2094	590	1504	
***** DIVISION TOTAL FOR		225470	50467	175003	LOWER MISS VALLEY

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	NORTH ATLANTIC	DIVISION	CONTRACT AMOUNT (\$000)	FY 1985 REQ'D MT (\$000)	BALANCE TO COMPLETE (\$000)
NEW YORK HARBOR COLLECTION & REMOVAL OF DRIFT, NY						
WEENAWKEN TO EDGEWATER, NJ						
***** PROJECT TOTAL	APR 85	3130	640	3130	640	2490
WYOMING VALLEY, PA						
RELIEF WELLS AT WILKES BARRE-KINGSTON						
WEIGHTED FILTER DRAINS						
***** PROJECT TOTAL	OCT 84 OCT 84	1230 6680	1230 4665	1230 6680	1230 4665	0 2015
***** DIVISION TOTAL FOR		7910	5895	7910	5895	2015
		11040	6535	11040	6535	4505

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SRGT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'DT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
BASSETT CREEK, MN					
DOWNSTREAM REACH TUNNEL	JUL 85	14800	5540	9260	
UPSTREAM RELOCATIONS A3(MC)	FEB 85	2982	1789	1193	
***** PROJECT TOTAL		17782	7329	10453	
DAVENPORT, IA					
STG III STRUCT. WORK	JUL 85	5240	730	4510	
***** PROJECT TOTAL		5240	730	4510	
ELLCOTT CREEK					
STG II B3 (MC)	JUL 85	9715	1595	8120	
***** PROJECT TOTAL		9715	1595	8120	
1WW, BRANDON ROAD L&D, IL					
RESURFACING	DEC 84	1990	1270	720	
***** PROJECT TOTAL		1990	1270	720	
PRESQUE ISLE PENINSULA, ERIE, PA					
BEACH NOURISHMENT	MAR 85	1655	1655	0	
***** PROJECT TOTAL		1655	1655	0	
***** DIVISION TOTAL FOR		36382	12579	23803	NORTH CENTRAL

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME -----	DESCRIPTION OF WORK -----	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'MT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
BONNEVILLE 2ND POWERHOUSE						
	BUILDINGS & OR SERV. BLDG & STS MAINT FAC.	JAN 85	3800	2000	1800	
	FISH & WILDLIFE FACILITIES STS CRANE	JUL 85	1075	250	825	
	POWER PLANT TRASH REMOVAL SYSTEM	JAN 85	1318	1000	318	
*****	PROJECT TOTAL		6193	3250	2943	
CHENA RIVER LAKES						
	BUILDINGS & G VISITOR CENTER	APR 85	1340	683	657	
*****	PROJECT TOTAL		1340	683	657	
LOWER SNAKE F & WL COMPENSATION						
	F & WL FACIL-CRYSTAL SPRINGS STEELHEAD HATCHERY ID	MAR 85	8139	1041	7098	
	F&WL FAC IRRIGON SAT FAC TRAP SPNGACC BIG CANYON	OCT 84	1102	1102	0	
	F&WL FACIL LOOKINGGLASS SAT TRAP SPN & ACC INNAHA	MAY 85	1660	593	1067	
*****	PROJECT TOTAL		10901	2736	8165	
MILL CREEK LAKE, WA						
	CHANNELS & CANALS-COMPLETE CHANNEL REHAB	APR 85	2674	1305	1369	
*****	PROJECT TOTAL		2674	1305	1369	
*****	DIVISION TOTAL FOR		21108	7974	13134	NORTH PACIFIC

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	OHIO RIVER	DIVISION	
EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'D MT (\$000)	BALANCE TO COMPLETE (\$000)
BEECH FORK LAKE, WV			
REMEDIAL WORK/ROADS			
***** PROJECT TOTAL	JAN 85	1190	940 250
BIG SOUTH FORK, KY & TN			
***** PROJECT TOTAL		1190	940 250
BLUE HERON ACCESS PART 2			
***** PROJECT TOTAL	MAR 85	3354	1300 2054
EVANSVILLE, IN			
LEVEE, FLOODWALL, PUMPING PLANT PART 3			
STRINGTOWN ROAD US HWY 41 PART 3			
***** PROJECT TOTAL	JUN 85 OCT 84	9671 2780	1500 550 8171 2230
***** PROJECT TOTAL		12451	2080 10401
LEVISSA & TUG FORKS-BIG SANDY RIV & UPPER CUMBERLAND RIV			
LEVEE/FLOODWALL/HIGHWAY & PINEVILLE HOSPITAL EXTENSION WALL			
PINEVILLE PUMP STATION			
UPSTREAM HWY SEGMENT			
***** PROJECT TOTAL	JAN 85 JUN 85 APR 85	15227 1275 1267	2111 280 995 112 1155
***** PROJECT TOTAL		17769	2503 15266
LOCKS & DAM 53, IL & KY			
REPAIR BEARTRAPS, LEAVES & INSTALL MACHINERY			
***** PROJECT TOTAL	JUL 85	1256	490 766
MILL CREEK, OH			
***** PROJECT TOTAL		1256	490 766
BARRIER DAM SEC 8			
CHANNEL & LEVEE, SEC 4			
MODIFY RR BRIDGE SEC 5			
MODIFY RR BRIDGE SEC 4			
***** PROJECT TOTAL	JUN 85 APR 85 OCT 84	21388 20135 2084	500 1800 20888 580 18635 2300 1484
MONTGOMERY LOCKS & DAM, PA			
***** PROJECT TOTAL		46141	4880 41261
LOCKS & DAM REHAB.			
***** PROJECT TOTAL	JAN 85	22320	4700 17620

DATE 03/29/84 NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ. W/IT (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION	PAGE
***** PROJECT TOTAL		22320	4700	17620		9
MUSKINGUM RIVER LAKES, OH (REHAB)						
***** PROJECT TOTAL	AUG 85	5700	200	5500		
SMITHLAND LOCKS & DAM, IL, IN & KY		5700	200	5500		
LUSK CREEK BOAT RAMP						
***** PROJECT TOTAL	JUN 85	2017	186	1831		
SOUTHWESTERN JEFFERSON COUNTY, KY		2017	186	1831		
LEVEE SEC 5 & POND CREEK STRUCTURE						
***** PROJECT TOTAL	FEB 85	17924	2600	15324		
STONEWALL JACKSON LAKE, WV		17924	2600	15324		
RELOCATIONS-REMAINING HWY'S RTS 44 & 46						
RESERVOIR CLEARING	MAY 85	5700	900	4800		
ROANOKE BAY MAINTENANCE COMPLEX	APR 85	1610	1200	410		
RR TRACK RELOCATION	MAR 85	1800	500	1300		
***** PROJECT TOTAL	MAY 85	3465	1500	1965		
TAYLORSVILLE LAKE, KY		12575	4100	8475		
SETTLERS TRACE REC PHASE II						
SETTLERS TRACE REC PHASE III	OCT 84	1948	580	1368		
***** PROJECT TOTAL	OCT 84	2341	377	1964		
***** DIVISION TOTAL FOR		4289	957	3332		
		146986	24906	122080	OHIO RIVER	

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	PACIFIC OCEAN	DIVISION	CONTRACT AMOUNT (\$000)	FY 1985 REQ'NT (\$000)	BALANCE TO COMPLETE (\$000)
BARBERS POINT HARBOR, HI						
BEAUTIFICATION	DEC 84	1000		1000	1000	0
***** PROJECT TOTAL		1000		1000	1000	0
***** DIVISION TOTAL FOR		1000	PACIFIC OCEAN	1000	1000	0

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	SOUTH ATLANTIC	DIVISION		
	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'D MT (\$000)	BALANCE TO COMPLETE (\$000)
B. EVERETT JORDAN DAM AND LAKE				
POPLAR POINT RECREATION AREA				
***** PROJECT TOTAL	OCT 84	10831	3467	7364
CENTRAL AND SOUTHERN FLORIDA				
MARTIN COUNTY CHANNEL C-131				
WEST PALM BEACH PUMP PLANT (S-319) MACHINERY				
***** PROJECT TOTAL	OCT 84 OCT 84	3175 6850	995 437	2180 6413
***** PROJECT TOTAL		10025	1432	8593
DADE COUNTY				
BEACH RENOURISHMENT (63RD ST-37TH ST)				
***** PROJECT TOTAL	SEP 85	2723	0	2723
FALLS LAKE				
BEAVERDAM RECREATION AREA				
FISH AND WILDLIFE SUBIMPOUNDMENTS				
STATE O&M FACILITIES AND RECREATION AREA				
***** PROJECT TOTAL	JUL 85 JUN 85 JUL 85	3559 4083 1485	834 1000 465	2725 3083 1020
***** PROJECT TOTAL		9127	2299	6828
FOUR RIVER BASINS				
FLATWOODS AND TROUT CREEK RECREATION (PHASE III)				
***** PROJECT TOTAL	DEC 84	1455	455	1000
***** PROJECT TOTAL		1455	455	1000
PORTUGUES & BUCANNA RIVERS				
CERRILLOS RESERVOIR CLEARING				
LOWER BUCANA CHANNEL RECREATION				
UPPER PORTUGUES CHANNEL SECTION 6E				
UPPER PORTUGUES CHANNEL SECTION 6F				
***** PROJECT TOTAL	MAY 85 JUN 85 MAY 85 MAY 85	1673 1524 2892 3933	200 350 1100 1500	1473 1174 1792 2433
***** PROJECT TOTAL		10022	3150	6872
RICHARD B. RUSSELL DAM & LAKE				
PUMP STORAGE GENERATORS				
***** PROJECT TOTAL	MAY 85	21975	2000	19975

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

PROJECT NAME

DESCRIPTION OF WORK

PROJECT NAME ***** DESCRIPTION OF WORK	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'D (\$000)	BALANCE TO COMPLETE (\$000)	DIVISION
PUMP STORAGE TAILRACE	JUN 85	4559	1000	3559	
REMAINING SC RECREATION FACILITIES	JUL 85	6501	100	6501	
REMAINING GA RECREATION FACILITIES	JUL 85	2066	100	1966	
***** PROJECT TOTAL		35221	3200	32021	
TENNESSEE-TOMBIGBEE WATERWAY					
ALICEVILLE-PLYMOUTH BLUFF RECREATION	OCT 84	3500	1689	1811	
ALICEVILLE-EROSION CONTROL FY85	OCT 84	2520	2520	0	
BAY SPRINGS - CROWS NECK RECREATION	OCT 84	3800	1800	2000	
COLUMBUS-EROSION CONTROL FY85	OCT 84	2150	2150	0	
COLUMBUS-SPARE PARTS FY85	OCT 84	7150	7150	0	
DIVIDE CUT-EROSION CONTROL FY85	OCT 84	1250	1250	0	
GAINESVILLE-EROSION CONTROL FY85	OCT 84	1250	1250	0	
LOCK B-EROSION CONTROL FY85	OCT 84	6930	6930	0	
LOCK C-EROSION CONTROL FY85	OCT 84	8861	8861	0	
LOCK C-EROSION CONTROL FY85	OCT 84	3500	3500	0	
***** PROJECT TOTAL		40311	37100	3611	
TOMBIGBEE RIVER AND TRIBUTARIES					
INTERIM MEASURES PHASE III (REH)	JAN 85	4325	582	3743	
***** PROJECT TOTAL		4325	582	3743	
***** DIVISION TOTAL FOR		124640	51685	72955	SOUTH ATLANTIC

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	SOUTH PACIFIC	DIVISION	
	EST AWARD DATE	FY 1985 REQ. MT (\$000)	BALANCE TO COMPLETE (\$000)
DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA			
RECREATION-LAKE SONOMA BEACH AREA	JUN 85	1500	300
VEGETATIVE MGT, FENCING	JUN 85	2590	2070
***** PROJECT TOTAL		4090	2370
FAIRFIELD VICINITY STREAMS			
MCCOY CREEK CHANNEL, LAUREL DVR & LAUREL CREEK AA03 CONTRACT			
***** PROJECT TOTAL	JUL 85	3520	2570
FISHERMAN'S WHARF AREA, CA		3520	2570
BREAKWATER A1			
***** PROJECT TOTAL	FEB 85	16600	13040
LOS ANGELES COUNTY DRAINAGE AREA, CA (LOS ANGELES RIVER)		16600	13040
CHANNEL INVERT (SEPULVEDA DAM BASIN)			
CHANNEL INVERT TOE (LOS FELIZ TO FLETCHER DR)	APR 85	2400	0
LOW FLOW CHANNEL (4TH ST. TO WASHINGTON BLVD.)	APR 85	1030	0
LOW FLOW CHANNEL (DAYTON AVE. TO N. MAIN ST)	APR 85	1720	0
***** PROJECT TOTAL	APR 85	2400	0
MERCED COUNTY STREAMS, CA		7550	0
BEAR LAKE - MAIN DAM B05 CONTRACT			
CASTLE LAKE-MAIN DAM A06 CONTRACT			
***** PROJECT TOTAL	JUN 85	26940	23340
NEW MELONES LAKE, CA	OCT 84	4890	1790
***** PROJECT TOTAL		31930	25130
RESERVOIR CLEARING PHASE 2 PART 2			
***** PROJECT TOTAL	OCT 84	1340	390
PAJARO RIVER, CA		1340	390
JVAS CREEK CHANNELS			
***** PROJECT TOTAL	APR 85	1110	0

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ***** DESCRIPTION OF WORK	SOUTH PACIFIC	DIVISION	
EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'T (\$000)	BALANCE TO COMPLETE (\$000)
***** PROJECT TOTAL	1110	1110	0
SACRAMENTO RIVER BANK PROTECTION PROJECT, CA			
BANK PROTECTION, UNIT 39			
***** PROJECT TOTAL	4400	200	4200
SACRAMENTO RIVER, CHICO LANDING TO RED BLUFF, CA			
BANK PROTECTION, UNIT 8			
***** PROJECT TOTAL	4400	200	4200
SAN FRANCISCO BAY TO STOCKTON, CA			
NEW YORK SLOUGH TO AVON			
***** PROJECT TOTAL	2840	600	2240
SAN LUIS REY RIVER			
***** PROJECT TOTAL	2840	600	2240
LEVEES PILGRIM CREEK TO NARROWS WITH GROINS			
***** PROJECT TOTAL	15450	1230	14220
WALNUT CREEK, CA			
***** PROJECT TOTAL	15450	1230	14220
SAN RAHON BYPASS AND WALNUT CREEK			
***** PROJECT TOTAL	18600	10000	8600
UPPER PINE CREEK CHANNEL			
***** PROJECT TOTAL	18600	10000	8600
SAN RAHON BYPASS AND WALNUT CREEK			
***** PROJECT TOTAL	21505	7800	13705
UPPER PINE CREEK CHANNEL			
***** PROJECT TOTAL	14105	3500	10605
SAN RAHON BYPASS AND WALNUT CREEK			
***** PROJECT TOTAL	35610	11300	24310
SAN RAHON BYPASS AND WALNUT CREEK			
***** PROJECT TOTAL	142940	45870	97070

SOUTH PACIFIC

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME ----- DESCRIPTION OF WORK	SOUTHWESTERN	DIVISION	EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 RED MT (\$000)	BALANCE TO COMPLETE (\$000)
ARCADIA LAKE, OK						
PUBLIC USE AREAS, STAGE II-B			MAR 85	6211	1000	5211
***** PROJECT TOTAL				6211	1000	5211
CORPUS CHRISTI SHIP CHANNEL						
BEACON 82 THRU & INCL CHEMICAL TB, SPILLWAYS & WEIR			DEC 84	17000	5800	11200
***** PROJECT TOTAL				17000	5800	11200
EL PASO, TX						
NORTHGATE AND RANGE DAMS			DEC 84	1549	1549	0
***** PROJECT TOTAL				1549	1549	0
HIGHLAND BAYOU						
HIGHLAND BAYOU-MI 0.0 TO 8.56			JAN 85	7369	579	6790
***** PROJECT TOTAL				7369	579	6790
JOE POOL LAKE						
ROAD 661			JAN 85	1978	1978	0
STATE RECREATION FACILITIES			MAY 85	11754	3800	7954
***** PROJECT TOTAL				13732	5778	7954
RAY ROBERTS LAKE						
BOUNDARY FENCING PT IV			OCT 84	1685	1685	0
COUNTY ROADS			OCT 84	3405	1100	2305
DENTON CO-ELEC LINE-LAKE AREA			FEB 85	1105	600	505
***** PROJECT TOTAL				6195	3385	2810
SAN ANTONIO CHANNEL IMPROVEMENT, TX						
TUNNEL SAR-UNIT 8-4, 8-5 & 7-3-1			MAR 85	40128	6520	33608
***** PROJECT TOTAL				40128	6520	33608

NEW CONTRACT AWARDS SCHEDULED FOR FY 1985 FOR THE
(CONTRACT AMOUNTS EQUAL OR GREATER THAN \$1000000)

SORT: DIVISION, PROJECT DESCRIPTION, LINE ITEM DESCRIPTION

PROJECT NAME

DESCRIPTION OF WORK

VINCE AND LITTLE VINCE BAYOUS, TX

LITTLE VINCE BAYOU-MI 2.7 TO 4.2

***** PROJECT TOTAL

***** DIVISION TOTAL FOR

SOUTHWESTERN

GRAND TOTAL ALL DIVISIONS

SOUTHWESTERN	DIVISION			
EST AWARD DATE	CONTRACT AMOUNT (\$000)	FY 1985 REQ'D (\$000)	BALANCE TO COMPLETE (\$000)	
JUN 85	5280	868	4412	
	5280	868	4412	
	97464	25479	71985	
	814563	227907	586656	

QUESTIONS SUBMITTED BY SENATOR JOHNSTON

PONAPE HYDROPOWER PROJECT

Senator JOHNSTON. P.L. 96-514 provided \$250,000 for the preparation of a feasibility study of the proposed Nanpil Hydropower project on Ponape. What is the status of this study?

General BRATTON. The Pacific Ocean Division signed a Memorandum of Understanding with the State of Ponape and the Trust Territory of the Pacific Islands in September 1981 to perform a detailed feasibility and engineering study for hydropower development. The feasibility study was completed in February 1982 for a hydropower facility on the Nanpil River with capacity of 1700 kilowatts.

Senator JOHNSTON. When will the estimates be completed?

General BRATTON. The plans and specifications for the hydropower project were completed and delivered to Ponape State in November 1983. The current estimated total cost is \$8,000,000.

QUESTIONS SUBMITTED BY SENATOR SPECTER

PRESQUE ISLE LOCAL PROTECTION PROJECT

Question. Mr. Gianelli, Congress directed the Corps of Engineers to use \$300,000 of available funds to undertake the continuation of engineering and FY 1983 Supplemental Bill (P.L. 98-63). In addition, Congress appropriated \$500,000 for the same project in the FY 1984 Energy and Water Bill (P.L. 98-50). Yet, to date, the Corps has only spent \$10,000 of those funds to "assess the extent and feasibility of construction" when, in fact, the phase I GDM report was approved November 30, 1980. Could you explain to the Committee why the Corps has not followed the Congressional intent to proceed with the continuation of engineering and design?

Answer. In FY 1983 the Buffalo District was provided \$10,000 to reevaluate the scope of the proposed continuation of planning and engineering work. The field was requested to focus on the construction required to reduce existing operation and maintenance costs at Erie Harbor and eliminate any construction associated solely with recreational purposes. The reevaluation report was needed because the Office of Management and Budget, in a letter dated October 5, 1983, related the Administration's concern about committing limited Federal funds to water projects designed primarily for recreational opportunities.

We are now reviewing the District's assessment. It indicates that there may be a feasible alternative solution to the Presque Isle permanent project which meets the objective of reducing operation and maintenance costs without expanding beach recreation. The most likely alternative project depends upon benefits from reducing the cost of

dredging the Erie Harbor entrance channel. However, what is missing from the assessment is an evaluation to determine that there are no more cost-effective measures to reduce the Federal costs of dredging the entrance to Erie Harbor.

Question. When do you intend to release those funds appropriated last year for Continuation of Planning and Engineering?

Answer. A decision regarding additional funding for the Presque Isle Project will be forthcoming upon completion of our review of the District's reevaluation report -- including receipt of satisfactory answers to the questions which we have -- and assurance that a more cost-effective solution exists to the present problems of beach erosion and maintenance of the Erie Harbor entrance channel.

QUESTIONS SUBMITTED BY SENATOR CHILES

CANAVERAL HARBOR, FLORIDA

Question. Congress has appropriated \$3,885,000 for construction of the West Turning Basin Project of Port Canaveral, Florida in fiscal year 1983 and fiscal year 1984. I am greatly concerned, however, about the numerous delays we have encountered in the past and, now, reports of further delay. Even after a two-year study by the Jacksonville office of the Corps yielded a most favorable benefit/cost ratio which could cause an additional two-year delay in construction. These delays are despite the instructions to the Corps by Congress to commence construction without delay and to proceed under the historic cost sharing formula. Please explain the present status of the Port Canaveral West Turning Basin Project.

Answer. The project is currently in the engineering and design stage.

Question. Please provide a timetable for the following:

- a. Completion of Corps Report and EIS.
- b. Completion of the final report.
- c. Award of the dredging contract.
- d. Completion date of the dredging contract.

Answer. The Jacksonville District Engineer will complete the engineering aspects of the General Design Memorandum (GDM) in March 1984. Additional economic studies are underway that are scheduled for completion in January 1986. These studies are necessary to determine whether the project has a favorable benefit to cost ratio under the Principles and Guidelines for Water and Related Land Resources Implementation Studies. These studies must be completed and approved prior to circulating for public review the GDM and Environmental Impact Statement (EIS). The GDM and Final EIS will be complete in late summer/early fall 1986. Award of the dredging contract could follow and actual construction would take about a year.

Question. Does the U. S. Army Corps of Engineers plan to abide by the mandate of Congress to treat this project as a "continuation of construction"

Answer. The guidance expressed by the Appropriations Committees in the reports accompanying the Energy and Water Development Appropriation Act, 1984 and the Supplemental Appropriations Act, 1983, will certainly be given due consideration once the economic merits of the Canaveral Harbor extension have been satisfactorily demonstrated. That promise was stated clearly in a 15 December 1983 letter which the Assistant Secretary of the Army (CW) wrote to Mr. Charles M. Rowland, Port Director, Canaveral Port Authority. Moreover, the Army had previously promised Mr. Rowland in a 18 March 1983 letter to "review the entire matter", as soon as an up-to-date analysis of the project's benefits and costs could be completed. It is now time to allow the Jacksonville District to complete a modern analysis of the project's benefits and costs.

Question. What is the Corps justification for singling out the cruise ship industry and treating it differently than other indigenous industries throughout the country?

Answer. We recognize the importance of tourism and the cruise ship industry to the economic fabric of Florida. Although benefit computation procedures vary according to the type of project, all Corps projects must adhere to the same set of evaluation procedures. The identification of an established need and the computation of a favorable benefit to cost ratio are requisites of all Corps project recommendations. The original authorization for Port Canaveral was based on cargo benefits. However, the situation changed and the port proposes to use the west basin primarily for cruise ships. Cruises are primarily for recreation and therefore, the procedures for evaluating recreation apply to the benefits received by the cruise passengers. The methods used by Jacksonville District to compute the recreation benefits did not produce a convincing basis for establishing the project's merits, and therefore, the additional economic studies are necessary.

EVERGLADES NATIONAL PARK, FLORIDA

Question. Last year Congress provided legislative authority (P.L. 98-181) for the U. S. Army Corps of Engineers to modify water releases to Everglades National Park from the water conservation areas. This flexibility was requested by the Park Service in order to meet the water-related needs of the Park. Congress also authorized the Corps to provide flood protection for homeowners in the area who may be adversely affected by the new water release schedule and to acquire agriculturally developed lands which may be similarly affected.

What progress has been made in implementing these provisions of Public Law 98-181?

Answer. We plan to soon initiate a two-year field test of a new limited water delivery schedule from our Central and Southern Florida Project to the Everglades National Park (ENP). Flows under this schedule would be limited to avoid increasing flood damages in developed areas and to avoid significant changes to agricultural areas. We will carefully monitor this field test to determine beneficial impacts on the ENP and to project from the data obtained, whether additional flows would be beneficial to the ENP and what impacts would occur to residential and agricultural areas. At the end of the test a report will be prepared which addresses a long-term delivery schedule; identifies projected impacts on the ENP and on agricultural, residential, and other private properties. We believe the above course of action represents a logical approach to developing and determining the feasibility of an improved water delivery schedule to the ENP. The above also provides time to assess other improvements the Corps is undertaking for the ENP and time to engineer and design the flood protection measures.

Question. What is your projected timetable for constructing the necessary flood protection for the homeowners?

Answer. The construction of flood protection measures would follow completion of our limited two-year field test and then only if determined necessary.

Question. What land acquisition is anticipated?

Answer. We believe further information is needed from our field test prior to undertaking major acquisition of private property.

Question. Can existing funds in the water control project be used for the purposes of flood protection and land acquisition, or is a specific appropriation necessary to accomplish this objective?

Answer. Funds allocated for FY 1984 should be sufficient to cover all activities planned for field testing this year. We are planning no land acquisition or flood protection this year.

Question. Were any funds requested for this purpose in the FY 1985 budget?

Answer. As in FY 1984, we are planning no land acquisition or flood protection. Therefore, the FY 1985 budget does not include funds for either activity.

Question. What is the status of the Shark River Slough Study?

Answer. Completion of the Shark River Slough Study is currently being held in abeyance until further information is available from the field test.

Question. Are additional funds necessary to complete the Shark River Slough Study?

Answer. Until the information is available from the field test we cannot anticipate future funding requirements for the Shark River Slough Study.

KISSIMMEE RIVER, FLORIDA

Question. The State of Florida had been working with the Corps of Engineers to secure the necessary permits to initiate a demonstration project concerning the dechannelization of the Kissimmee River. Please explain how the Corps of Engineers plans to handle the State of Florida request to begin a demonstration project to restore eight miles of the Kissimmee River.

Answer. Last year the State of Florida submitted to our Jacksonville District a request for a permit for a demonstration project to restore portions of the Kissimmee River by dechannelization. Dechannelization would be inconsistent with the Congressionally authorized navigation and flood control purpose of the Kissimmee River project. Therefore, we cannot issue the permit. Congressional authorization is required for the State to proceed with dechannelization. We understand, however, that the State submitted a new proposal to the Jacksonville District Engineer, who is currently reviewing it.

Question. Will Congressional action be necessary for the State to undertake this project?

Answer. Congressional authorization is required for dechannelization. We cannot comment at this time whether the State's new proposal will require Congressional authorization.

Question. It is my understanding the Corps has told the State that the survey review/EIS process currently underway will be complete by the end of the year. Is this your projected timetable?

Answer. The Kissimmee River Study is presently scheduled for completion at the end of this year. The study may be delayed, however, to incorporate the new proposal from the State.

Question. Is fiscal year 1985 funding adequate to participate in this project? Are more funds needed in fiscal year 1984 to complete the study presently underway?

Answer. No additional FY 1984 funds are needed at this time for the Kissimmee River Study. Lacking additional authorization and, pending review of the State's new proposal, FY 1985 funding of a demonstration project cannot be recommended.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

GREATER NEW YORK CITY AREA WATER SUPPLY

Question. It is obvious that the Greater New York Area consists of parts of several states. Do you consider the present water supply problems in this area to be of an interstate or regional nature, or are they discrete State or local problems?

Answer. There is a mix of both kinds of problems. However, in terms of maintaining a satisfactory balance between the quantity of water available for intake to the distribution system and the water desired by the users, a more significant question for New York City is whether intrastate or local solutions to undesirable deficits are available. The Corps of Engineers in its NEWS Study of the New York Metropolitan Area found that the Connecticut portion of the Area has completed a plan and the New Jersey portion is developing a plan to meet water requirements with intrastate projects. This study also found that most feasible way to supplement existing water supplies in southeastern New York State would be an intrastate project to divert high flows from the Hudson River.

Question. In your opinion, what are the most significant water supply needs and problems in the Greater New York Area?

Answer. The needs are threefold. One is to assure continued operation of existing facilities through adequate maintenance programs and construction of facilities that guarantee reliable operation. A second is to meet present and future water demands at a reasonable cost. The most practical means to do this is to implement conservation measures that will reduce losses and demands on the system and, at the same time, to plan for and implement the most feasible means to increase supply so that unacceptable deficits are eliminated.

The third need is to establish rate schedules which will provide adequate operational funds and will provide the basis for financing arrangements necessary to support the capital improvement program needed for the future.

Question. Do local interests agree with your assessment of the problem?

Answer. We expect they do; however, local interests themselves are in the best position to address their commitment to the measures necessary for financing operations and improvements.

Question. The present NEWS Study authorization (PL 98-298) recognized the Federal responsibility for construction, operation and maintenance of reservoirs, conveyance facilities and purification works for water supply. This was further reflected last year when the Congress, in the Conference Report on the Fiscal Year 83 Supplemental Appropriations Bill, expressed its concern about the water supply problems of the Greater New York Area and requested the Corps of Engineers to prepare a plan of action addressing those concerns. In your professional opinion, what actions are needed next?

Answer. Public Law 98-298 did recognize an expanded Federal role for water supply in the Northeast; however, this role was to be in connection with systems of reservoirs and exchanges between river basins. We have seen no new proposals for the New York Metropolitan Area which meet these requirements. As far as the actions needed, in

our opinion, the next actions should be taken by non-Federal agencies responsible for serving the Greater New York Area.

Question. What is the likelihood of failure in New York City Water Tunnel #1 or #2 during the interim construction period of Tunnel #3?

Answer. The engineers involved in the design, operation and maintenance of the tunnels are best qualified to answer this question.

Question. If a failure requiring total shutdown of one of the tunnels were to occur, what would be the consequences?

Answer. Certainly the consequences could be expected to be serious. Those officials of the areas served by these tunnels, and who are responsible for organizing the response to such an event are in the best position to provide details concerning consequences.

Question. What can be gained from the optimum construction schedule for Tunnel #3?

Answer. The tunnel of course would be completed sooner. Beyond that, we would defer to the officials of the areas served by these tunnels who, in our judgment, are best qualified to provide details concerning the expected benefits of optimum construction.

Question. If there is a deficit of supply to the New York City area at the present time, how long will it take to construct supply facilities to eliminate the deficit?

Answer. The Corps has estimated that if there were total agreement and the proposed solution could be initiated now, about twenty years would pass before a major supply project would become operational. This period would consist of project planning and project design time as well as the construction time and assumes that financing would be available when needed.

QUESTIONS SUBMITTED BY SENATOR DeCONCINI

UPPER GILA RIVER BASIN

Question. Could you provide for the record a current status report on the joint Corps and Bureau of Reclamation study on alternative flood proposals for the Upper Gila River and Tributaries. If that study has been completed, could you provide the study recommendations or, if the study has not been completed, could you give the committee a date when you will finish the study.

Answer. The cooperative basinwide study will be completed in September 1984 and will identify the best overall solution to flooding and water supply problems in the study area. The Corps' overall feasibility study for the Upper Gila River will be completed by September 1987.

Question. I have been advised that there has been discussion about the possibility of constructing multipurpose dams at the Quail Springs site on the San Francisco River and the Conner site on the Gila River in New Mexico. Have these sites been reevaluated after the October floods?

Answer. These sites are being evaluated under our joint Upper Gila River basinwide study with the Bureau of Reclamation. This evaluation is considering new knowledge gathered as a result of the October 1983 floods.

Question. Is any consideration being given to the possibility of including Hooker Dam as an alternative under this study?

Answer. Hooker Dam is still an available alternative. However, we understand that the State of New Mexico considers the Conner site a preferable alternative.

Question. Could a dam at the Hooker site be constructed under the authority of the Central Arizona Project or under the Corps authorization for Camelsback Dam? Could you elaborate on these issues?

Answer. It is our understanding that a dam at the Hooker site was authorized as an element of the Bureau of Reclamation's Central Arizona Project and could be constructed under that authority. A dam at the Hooker site could not be constructed under the Corps' authority for Camelsback Dam.

PHOENIX ARIZONA AND VICINITY

Question. Could you detail the construction activities to be completed in fiscal year 1985 for the Stage 2 project?

Answer. The Adobe Dam is complete. In fiscal year 1985 we will complete construction of the New River Dam including cultural resources preservation and acquisition of permanent operating equipment.

Question. Is the \$7.5 million request sufficient to keep this project on track?

Answer. Yes, with that amount the project schedule can be maintained.

Question. What is the schedule for completion of construction activities?

Answer. The New River Dam will be completed in May 1985. The first of four contracts for the Arizona Canal Diversion Channel will be awarded in 1985. Our construction activities for the entire project are scheduled for completion in September 1991.

Question. What is the estimated total cost for remaining work?

Answer. The estimated total cost for work remaining after fiscal year 1985 is \$214.6 million.

Question. Do you anticipate any delays, and if so, for what reasons?

Answer. We expect construction to proceed as scheduled.

SUBCOMMITTEE RECESS

Chairman HATFIELD. We will recess until February 21 at 10 a.m. when the Secretary of the Interior Clark will appear to present the Bureau of Reclamation requests.

[Whereupon, at 11:50 a.m. Thursday, February 9, the subcommittee was recessed to reconvene at 10 a.m. February 21.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1985

TUESDAY, FEBRUARY 21, 1984

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:10 a.m. in room SD-192, Dirksen Senate Office Building, Hon. James Abdnor presiding.

Present: Senators Abdnor, Stennis, and Burdick.

DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY

STATEMENT OF WILLIAM CLARK, SECRETARY OF THE INTERIOR

HEARING PROCEDURE

Senator ABDNOR. The hearing will come to order.

Today, we are pleased to welcome to the committee William Clark, Secretary of the Interior, who will present an overview of the fiscal year 1985 budget request of the Department of the Interior and other policy issues which impact the water resource development programs of the Nation.

Following Secretary Clark's oral remarks, I propose that we then proceed with any policy questions the members may have for the Secretary. Any questions on specific projects should be addressed to Commissioner Broadbent of the Bureau of Reclamation who will be testifying following Secretary Clark.

With that, it is a pleasure to welcome you, Secretary Clark. Before proceeding, however, I would like to call on Senator Stennis.

Senator STENNIS. Thank you for recognizing me. I am here as part of this subcommittee—I have been a member here a long time. I think back over the years of all that has happened since the end of World War II in the military weaponry and the programs of that kind that I am familiar with. However, the programs this subcommittee deals with have had and will have the most lasting benefit for the Nation as a whole. And the money that has been spent, virtually every dollar of it, has been on a constructive basis and it is already paying off and will continue to far beyond our time—I have to hold back some, I am being too strong, but constructive investment for future generations. And

where would we be if we didn't have it? Where would the West be? I am not pointing any fingers at the West. Where would the South be—or any other area?

I am glad to be here with you.

Thank you very much.

Senator ABDNOR. Thank you, Senator Stennis. One of our distinguished members that knows what he is talking about. I couldn't agree more about the importance of water. I am sure the lack of energy couldn't touch the lack of water.

With that, Mr. Secretary, it is a pleasure to welcome you to the subcommittee. I believe it is your first appearance and we are anxious to hear from you and to give you a very, very special welcome.

REMARKS OF WILLIAM CLARK, SECRETARY OF THE INTERIOR

Secretary CLARK. Thank you, Mr. Chairman, Senator Stennis. I certainly find it a privilege to appear before you this morning as I enter my third month as Secretary of the Interior. Several exciting things have occurred in this short period of time, as I mentioned before. The President asked me to review what he terms the three P's—policy, process, and personnel. Among the 10 bureaus in the Department of the Interior, I think Reclamation has probably received more than its share of that review resulting in several things that I would like to mention before getting to the budget specifically, but they all affect the budget.

DEPARTMENTAL REORGANIZATION

One, we have been through a reorganization involving 6 of the 10 bureaus, including Reclamation, so that at this time, and after consultation with Members of the Senate and House, the Bureau of Reclamation, Bureau of Mines, and U.S. Geological Survey have been put together under one Secretariat called Water and Science. Its new head is Robert Broadbent who is here today—formerly and still technically Commissioner of Reclamation, but Bob is now Assistant Secretary-designate for Water and Science. We feel that this realignment, which has not changed the organic structure of the three bureaus themselves but links them together under one Secretariat, offers a better management and a more logical and reasonable linkage of entities.

WATER SUMMARIES

Additionally in this period of time, the Department and the USGS have issued the first water summaries on a State-by-State basis. This will be an annual venture hereafter, which we recommend for your reading. It is a fine report, both good news and some not too good.

We find that we have abundant water in our country but we have insufficient storage facilities, and certainly not all of our water is in correct places in our estimation. We have some anomalies such as, on the one hand, some 30,000 cubic feet a second with 7½ gallons in each one of those cubic feet flowing down the Colorado River into Mexico; and many feel that water should be utilized to a higher extent. We believe the budget this year will show that attempt.

In addition, we have a companion report called "Water in America," which is also revealing in many of its aspects.

ADMINISTRATION WATER POLICY

In the same period of time, President Reagan answered Senator Laxalt's letter of April 27 of last year signed by some 14 other Senators. A similar letter had been received from the Western Governors asking certain questions concerning water policy. On January 24 the President answered Senator Laxalt's letter and that is available to you as well. In that letter the President reiterated and reaffirmed the water policy of the administration.

There are three aspects of that, Mr. Chairman: one, the planning; second, construction; and third, dam safety.

PROJECT COST SHARING

I think the first point to be made is the President wishes no fixed formula or minimum in cost sharing. Now, cost sharing is very much with us. We realize the days are over when the Federal Government can go out and build another Hoover Dam all by itself. We need a lot of assistance. The President feels that, particularly in Reclamation, each dam, each project, is unique and must be approached thusly without a fixed or rigid formula.

In the planning process, however, we have a goal that is mentioned in the proposed budget. That goal would be, hopefully, 50-percent participation in the cost at the local level from the beneficiaries and/or local and State governments, but again, that is not rigid. In some cases their contributions will be higher and some lower depending on ability and feasibility.

Also, with new starts we will continue to look at the criteria, some of them historic: First of all, need; second, environmental and economic feasibility; next, of course, will be the local interest expressed in that project both initially and ongoing; and finally, cost sharing, the ability of the beneficiaries to come up with those moneys. Again, that relates to construction.

DAM SAFETY

The third item mentioned a moment ago was dam safety. The President has stated that safety in all governmental projects is paramount. We cannot delay true safety work. We find that within the 330 dams owned by Reclamation, some 53 probably require some safety work. The President has stated when it is purely a safety project or purpose, the Federal Government will pay for that safety across-the-board. On the other hand, if there is economic benefit derived from additional construction, that the beneficiaries receiving that benefit will pay for the work on a pro-rata basis—again not a rigid formula, but probably on a pro-rata basis according to their obligation under an existing contract, and that is to be worked out.

So that is the announced policy. Some details will be worked out. I am in constant communication with Assistant Secretary of the Army

William Gianelli on the subject of the dam safety issue. We are creating a small task force, as directed by the President, to determine such things as the criteria designating safety on the one hand, subsequent economic benefit on the other.

BUREAU OF RECLAMATION BUDGET

Moving on to the budget itself, Mr. Chairman, for the first time in the history of Reclamation its budget has broken the billion dollar mark, and within that billion dollars some \$764 million are designated for construction. Of that \$764 million, about 91 percent of it will be going to 12 projects; however, some 71 ongoing construction projects and 2 major and 7 lesser new starts are involved and will be receiving funds if our budget is accepted for that \$764 million.

The next highest figure will be \$150 million for operation and maintenance, some \$67 million for loans, and roughly \$36 million in the area of general investments.

CONSTRUCTION NEW STARTS

We realized for some time there has not been a major new start for some years. In the 1984 supplemental we are asking for three, what we call new starts—one is the Santa Margarita project in California where over 50 percent of the cost will be for M&I water, the largest portion being for the Marine base at Camp Pendleton which is at its upper limit of its current water supply; the second new start is the Headgate Rock hydroelectric project in Arizona which is for the benefit of the Colorado River Indian Reservation for generating hydroelectric power; and Buffalo Bill Dam modifications is the third proposed project in the 1984 supplemental.

In 1985 we propose two new projects—one is Palisades in southeastern Idaho, the other is the augmentation to the Hoover Dam which will roughly increase hydroelectric capacity by 30 percent.

So, with the five proposed new starts in the 1984 supplemental and the 1985 budget, I think we can say that, characterized by those projects using the criteria I mentioned a moment ago, these projects are primarily for hydroelectric power generation and secondarily for water storage.

I think it is significant that we are emphasizing hydroelectric power in the face of the fact that we are now importing, unfortunately, some 30 percent of our oil from countries beyond our borders and we are back to a position roughly equal to where we were on importation 10 years ago during the OPEC prices, the difference being we are paying 10 times more for oil now. So hydroelectric is a big item.

The second characterization that we can make in these five new starts is the cost-sharing aspect. Relatively speaking, few Federal dollars are going to be involved in relation to local dollars, particularly dollars from the hydroelectric companies.

AUBURN DAM, CALIF.

In the same vein, while it is not in the budget as a new start, we are putting emphasis on the Auburn Dam project where the Federal Government has already invested some \$223 million on the dam and \$328 million on the overall Auburn-Folsom project. I am working with Governor Deukmejian and Senators Cranston and Wilson in creating a very fast-moving task force to give us the feasibility on proceeding with Auburn in further planning, and again the emphasis is on cost sharing. We feel that the hydroelectric companies of California may very well be willing to come forward with \$600 to \$700 million for the next phase of this \$2 billion project. Again, in this period of austerity, we are trying to reduce Federal involvement. Our biggest involvement is coordination and providing the incentives in the overall plan to move this project along where we have already invested quite a bit of money.

COLORADO RIVER BASIN FLOODING

In the same period of time between Christmas and New Years, I had the opportunity to view the Glen Canyon Dam and the emergency work that is going on there. Moving on down the Colorado River basin as far as the outlet into the State of Sonora, Mexico, I was able to view most every issue involving some seven States—not just the water issues and our responsibility of managing that river, but parks, recreation, and Indian rights. I found that we have some unusual issues and problems there. We are now operating with high releases in anticipation of even heavier runoff; however, we are satisfied that we are up to date and can avoid some of the issues of last year. We are providing full knowledge to the public on what the issues are along the river, what we are capable of doing, and, if necessary, and perhaps more importantly, telling them what we are incapable of performing.

INTRODUCTION OF WITNESSES

So, Mr. Chairman, that is my overall view of Reclamation at this time. For specific questions, today we have Richard Hite who is Deputy Assistant Secretary for Policy, Budget, and Administration, and Joe Gorrell for more specifics. As I mentioned, Bob Broadbent and also our Acting Commissioner of Reclamation, Bob Olson, are with us today if you wish to proceed through individual projects, or I am willing to answer questions concerning policy if you wish.

[The statement follows:]

STATEMENT OF WILLIAM CLARK, SECRETARY OF THE INTERIOR

Mr. Chairman and members of the subcommittee, it is a privilege and pleasure for me to appear before you today to discuss the fiscal year 1985 budget request for the Bureau of Reclamation and the administration's plans for the continued development of the Nation's water resources. I know you share my interests in further developing our water resources and improving management of our water supplies. Wise development and management is essential if we are to provide power and water for economic development while protecting and improving the quality of our water.

The Nation as a whole has sufficient good quality water to serve our present needs and future growth. However, in some local areas there are insufficient or poor quality

supplies, periodic floodings, and conflicting uses. By working with State and local governments we can help solve some of these problems.

For several years the Bureau of Reclamation has initiated no new construction of new projects due both to general economic conditions and to the lack of a clear Federal policy on water development. This administration is committed to the development of water resources. We support new projects where the needs are clear and the projects are economically feasible, environmentally sound, have strong local support, the costs are shared, and where economic conditions allow for investment of Federal funds.

The lack of a clear statement on cost-sharing policy has until recently contributed to delays in initiating new construction. As you know, on January 24 the President announced the administration's policy on water project financing and cost sharing. In summary, project beneficiaries are to bear a substantial share of the cost of project development. I hope we all agree that new partnership arrangements will be necessary to finance future projects. However, fixed formulas or minimum levels of participation will not be utilized. Non-Federal financing and up-front cost sharing will be negotiated with project beneficiaries on a case-by-case basis. Water development needs, geography, climatic conditions, economy, fiscal capabilities of beneficiaries, and Federal interests all vary from region to region. Factors such as prior commitments to individual States with regard to water development, timing, and type of non-Federal contributions, and financial capability of project sponsors and beneficiaries will all be considered in the decision to move ahead with a project. In addition, the administration's policy calls for project sponsors to share equitably in the costs of project planning.

Safety deficiencies at Federal dams must be corrected as expeditiously as possible, and the cost of such work should be borne by the Federal Government. However, those costs attributable to economic benefits resulting from this work should be borne by those who realize the benefits.

CONSTRUCTION NEW STARTS

Our commitment to develop water resources is illustrated by our proposal for a fiscal year 1984 supplemental budget request which would allow the Bureau of Reclamation to use available funds to initiate three construction new starts: Buffalo Bill Dam in Wyoming would be enlarged and the former hydroelectric powerplant would be replaced by one having three and one-half times the generating capacity; a 19,500-kilowatt capacity hydroelectric powerplant would be constructed at the existing Headgate Rock Dam for the Colorado River Indian Reservation in Arizona; and the Santa Margarita project would augment southern California water supplies including needed supplies at the Marine Corps' base at Camp Pendleton. Work can begin on the Buffalo Bill and Headgate Rock projects without further authorizing legislation; however, authorization is required before construction can be initiated on the Santa Margarita project. All three projects have second-year funding in our 1985 budget request totaling \$15.6 million.

We are also proposing two additional new construction projects for fiscal year 1985. The Boulder Canyon project improvements, with proposed fiscal year 1985 funding of \$2 million, will allow us to continue activities to uprate generators at Hoover Dam to increase the nameplate generating capacity. Visitor facilities and a new highway bridge would also be constructed under this proposal. The Palisades powerplant in southeastern Idaho, budgeted at \$0.2 million for fiscal year 1985, would be enlarged to provide an additional 110-megawatt generating capacity. Both new starts require authorizing legislation before construction can begin.

CONSTRUCTION

The 1985 budget request for the Bureau's discretionary programs is \$1.08 billion, \$113.7 million, or 11 percent, higher than current fiscal year 1984 appropriations. The largest item increase, \$68.8 million, is in the construction program budgeted at \$764.1 million. This will permit us to meet contractor earnings on 71 ongoing projects, to initiate work on the Boulder Canyon and Palisades projects mentioned earlier, to initiate six dam safety projects, and to begin one drainage and minor construction project. The proposed funding level for construction would enable the Bureau to maintain a reasonable completion schedule for all projects presently under construction and proposed as new starts.

OPERATION AND MAINTENANCE

The operation and maintenance program is budgeted at \$149.7 million for fiscal year 1985. This will permit us to operate and maintain 32 projects, project areas, or divisions of projects, which produce power and provide water for municipal, industrial, and irrigation use and provide other benefits. Powerplant uprating activities to increase generating capacity at existing units will yield an additional 164.5 megawatts of capacity when all uprating programs in fiscal year 1985 are completed.

LOAN PROGRAM

For the loan program, the total budget request is \$67.5 million for fiscal year 1985—\$22.5 million higher than fiscal year 1984. All the increase will be used to keep the 14 ongoing loan projects on schedule. Five of these projects will be completed during fiscal year 1985.

GENERAL INVESTIGATIONS

We have increased the general investigations program by \$1.8 million to a total \$35.7 million in fiscal year 1985. All the increase will be applied to costs for six new advance planning studies. In appropriation language for this program, we have proposed that costs of advance planning for projects be reimbursable, as they were when advance planning was funded under the construction program. We also request \$58.9 million for general administrative expenses and \$1 million for the emergency fund.

Mr. Chairman, I am looking forward to working with you and the members of this subcommittee to expedite further development of our country's reasonable water requirements.

FEDERAL ROLE IN WATER RESOURCE DEVELOPMENT

Senator ABDNOR. Thank you, Mr. Secretary. As I said at the opening, we know you have an extremely busy schedule and other things to do so we will ask you a few policy questions and then excuse you. We wouldn't want to slow you down with your many responsibilities.

I didn't give Senator Burdick a chance to give an opening statement. We certainly welcome the Senator from North Dakota. I am sure you will have some questions.

I guess you already answered this, but for the record, what do you believe the role of the Federal Government in water resources development to be?

Secretary CLARK. Mr. Chairman, I believe it is primarily an overall coordinating role respecting State rights, the primacy of State waters, and in close consultation with those States, the Congress, and the interested public in those sectors to, as we say in our national water summaries, look at the needs of the people and meet those needs.

Senator ABDNOR. Let's talk specifically about the role in construction and the need there. What part should the Federal Government be playing?

Secretary CLARK. In the area of project construction, Mr. Chairman, again we look at the proposed or proffered need for a given project. We then look at the environmental and economic feasibility for the project, either having been advanced by preplanning. In most projects, I have become aware of the high degree of planning that has already been performed.

We then look at the question of local interest as revealed primarily by Members of the Congress and then look at the cost-sharing possibilities during these periods of austerity—again, that comes under the economic feasibility as well.

And looking at the many proposals that have built up over many years, try to work out priorities among those proposals and that is how we came up with the three new starts in the 1984 supplemental and the two in the 1985 budget.

Senator ABDNOR. Would you say that the new starts that you referred to are set in cement, rigid? Is there any chance of any others being added?

Secretary CLARK. Well, I think the tenor of the President's letter of January 24 is to get away from the term you used, Mr. Chairman, any rigidity. Flexibility, I think, is the key. Each project is unique in the five criteria I have mentioned and we try to take them case by case. These have developed, I believe, out of full consultation and information gathered over the years.

SANTA MARGARITA PROJECT, CALIFORNIA

In the 1984 supplemental three projects have been requested. The Santa Margarita project, while it certainly has been discussed at length, has not actually been authorized. But we have a case working with the Defense Department that we feel is high priority. Defense is coming up with most of the money and has already proposed that expenditure and it involves our national defense. We have some environmental issues that we are concerned with—one bird, one fish, and the sand-making ability of the Santa Margarita River—but most of that information will be available in the next 30 days. So, we hope that you will authorize that expenditure.

PROJECT AUTHORIZATIONS

Senator ABDNOR. Do you have a lot of projects authorized from years gone by, like the Corps? I am a little more familiar with that because I am chairman of the Water Resources Subcommittee of Environment and Public Works. I suppose you have a long list of projects that have been authorized over the years that have never been started or de-authorized, isn't that right?

Secretary CLARK. Not in relation to the Corps.

Senator ABDNOR. Not the Corps, I am talking about the Bureau.

Secretary CLARK. Yes, we certainly have some authorizations in our background.

FEDERAL ROLE IN WATER RESOURCE DEVELOPMENT

Senator ABDNOR. Well, let me go back to the Federal involvement in this area. Should the Federal role be different region by region, say a different involvement in the Southwest than in the Northeast? Should there be a variance?

Secretary CLARK. No, Mr. Chairman. In my short time in Interior, as with every issue I have seen, I think we have to take it project by project and without generalizing region to region.

Senator ABDNOR. I don't want to hog the whole time.

Senator Stennis.

Senator STENNIS. I yield to Senator Burdick.

Senator BURDICK. Welcome to the committee, Mr. Secretary.

Secretary CLARK. Thank you.

WATER RESOURCES AUTHORIZATION LEGISLATION

Senator BURDICK. Are you familiar with the water authorization bill that was voted out of Senator Abdnor's subcommittee?

Secretary CLARK. Generally, Senator, yes.

Senator BURDICK. Do you feel that legislation is a good approach?

Secretary CLARK. My understanding of its purpose, the general approach, as you call it, it is certainly feasible.

Senator BURDICK. In other words, when that water bill gets on the floor of the Senate, what will be the agency's position?

Secretary CLARK. As far as future support, Senator Burdick? I will require more study and I assure you more communication on the specific bill when it does get out.

Senator BURDICK. Is cost sharing to be in it?

Secretary CLARK. I understand so.

Senator BURDICK. Are you for that provision?

Secretary CLARK. As I recall the purpose, yes; but the specifics I will need a little more time on and I will be happy to answer you specifically as part of the record to be submitted.

Senator BURDICK. In other words, you can't be any more definite than that?

Secretary CLARK. No, Senator, I can't, unless you would be willing to take it line by line. I can try to analyze it in relation to the President's letter of January 24, but I can't be more specific without word-by-word analysis. But I am quite willing to follow up when I leave today and give you that analysis if you wish.

Senator BURDICK. Let me be specific in one respect. The bill proposes a formula for 35-percent cost sharing for flood control projects. Do you agree with that?

Secretary CLARK. Not with the formula. As I mentioned earlier today before you came in, we do not feel that a fixed or rigid formula of up-front moneys is reasonable at this time because in many cases, for instance in the new starts I mentioned today, we have far in excess of 35 percent. In one of them we have very little up-front money based on the inability of the beneficiary to come forward. So, it is the President's wish that we set aside any mathematical formula as far as Reclamation projects are concerned.

Senator ABDNOR. Would the Senator yield?

Senator BURDICK. Yes.

CONSISTENCY OF LEGISLATION WITH ADMINISTRATION POLICY

Senator ABDNOR. I would like to say, Mr. Secretary, as long as you are referring to the particular bill brought out of the Environment and Public Works Committee, that most of us feel that it is pretty consistent with the President's letter that you referred to. We have some problems

with it; I am still working on it. I am probably the first chairman in history to bring a bill out of the committee and then go back and hold more hearings trying to get people to work out problems.

We would like to know if you have some thoughts on it. We would welcome a chance to work out our problems as we go along here. We think that it is a good bill and it does follow pretty well with what the President has stated in his letter to us.

Secretary CLARK. Yes, Mr. Chairman, that is my understanding of the proposed legislation as well. That is why I have avoided any further generality until we can be specific. Senator Burdick mentioned a proposed 35-percent formula and I have explained that aspect is inconsistent with the President's policy. We certainly will stand by to work with the committee and its chairman.

Senator ABDNOR. We will be hoping to hear from you. We even have a time schedule to appear on the floor. We would like to urge you and your people to look it over carefully and let us know what we can do to make it more favorable to you.

Senator BURDICK. You mentioned inconsistent policy and I thought we had the administration's support of the bill. Thirty-five percent has been voted out. Has there been a change in the administration's position?

Secretary CLARK. Senator, I don't know what comment may have been on the 35-percent fixed formula prior to my involvement as Secretary, but I would say that policy as stated calls for issue-by-issue, project-by-project study, but that is not to infer or suggest that a high degree of cost sharing is of necessity. It is a suggestion of a fixed percentage that we feel in our experience we must attempt to avoid.

I mentioned a goal of 50 percent on the planning aspect, but again, the hope is that would not be a rigid percentage either.

CONSISTENCY BETWEEN AGENCIES

Senator ABDNOR. Could I add one thing, as long as we are talking about the bill?

Senator BURDICK. Certainly.

Senator ABDNOR. The 35 percent in our bill allows for project-by-project consideration, as well as the ability to pay and past commitments. That is in the legislation.

I think it is extremely important that we are consistent. The committee didn't attempt to tell the Corps what to do or the Bureau what to do. We realize that is different. But by the same token they must be consistent in principle or you are going to have lots of problems. You can't have one figure going over here with the Bureau and another one with the Corps, wouldn't you agree?

Secretary CLARK. Senator, my understanding of the situation is that the Corps has projects numbering in the thousands, Reclamation does not.

Senator ABDNOR. We have taken care of that pretty well. Most of them will be deauthorized under certain conditions; they can wait until

the new ones have been authorized and participate just like we do in the new ones. We try to account for all these things. We hope that your people will look at it very carefully so we can find out where we do differ. I think we have to have a meeting of the minds.

FLEXIBILITY IN WATER RESOURCE DEVELOPMENT

Senator BURDICK. I don't want to repeat myself, but the point is we should have known this position while we were taking testimony and marking up that bill. We assumed that what was being marked up was agreeable with the administration and now we have a change in signals; you want it case by case. When we marked up the bill I thought we had a good bill. What changed?

Secretary CLARK. It depends, Senator, on the interpretation of the 35 percent. If this is a goal it is one thing, but what we are asking for is a lack of rigidity, which I understand the chairman does concur in.

Senator BURDICK. As it stands right now, we can't bring that bill to the floor with the administration's support, is that right?

Secretary CLARK. I am not willing to agree with that until, as I mentioned to you a little earlier, I review it, and I will get back to you before the end of the day on that aspect of it.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Senator BURDICK. Now on a happier note. I am very pleased that the Bureau has requested \$53.5 million for the Garrison diversion project. That shows good judgment. [Laughter.]

Secretary CLARK. Thank you, Senator.

Senator BURDICK. Do you know anything about the work schedule on the project?

Secretary CLARK. No, but we have that information available here today, Senator, and can provide it when Commissioner Broadbent gets into specific projects.

Senator BURDICK. Let's see if you can supply me with this information at your earliest convenience.

Would you describe what work on the project is scheduled for the remainder of this fiscal year and fiscal year 1985?

Can you explain to the committee the consultation process that has been established with Canada and how these talks are progressing?

Can you explain the status of the fish and wildlife mitigation and enhancement plan of the Garrison project?

And the last aspect deals with the cost of the project. As you know, there is a great hue and cry every year about how much the project will cost; the fact that is hardly ever mentioned is that nearly 90 percent of the project's costs will be reimbursed by power revenues. In fiscal year 1982, about \$85 million was brought in by the Pick-Sloan dams. What is the most recent power revenue statistic available?

If you can supply me with that information at your earliest convenience, I will appreciate it.

Secretary CLARK. Fine. We can do that under written submission or we have someone here who can answer specifically today when my turn is over.

HIPLEX

Senator BURDICK. Now, for several years this committee has added funds to your budget to continue the cloud-top seeding development, high-altitude cloud physics research, and pilot training at the University of North Dakota, including work in the Colorado River. I understand that your budget has been increased by \$750,000. Will this increase be adequate to continue this work at the university?

Secretary CLARK. We will continue to support it both in spirit and in dollar in the Colorado River basin. And as to how much of that goes to the university, we will supply that to you.

WEATHER MODIFICATION CONTRACT WITH MOROCCO

Senator BURDICK. I understand that the Bureau of Reclamation and the Agency for International Development are planning a weather modification program for Morocco, which would apply cloud seeding techniques developed in North Dakota. I am pleased with this practical application of the research. Can you tell us about your plans for the Morocco project?

Secretary CLARK. No. Again, that contract will be supplied to you.

Senator BURDICK. Thank you very much.

Secretary CLARK. Thank you, Senator.

Senator ABDNOR. We have quite a number of people with Mr. Broadbent who can get more specific on some of those questions.

Senator STENNIS.

PUBLIC WORKS PROGRAM

Senator STENNIS. I won't take a great deal of time, Mr. Chairman, and I am not going into any specific projects.

Let me say this to Mr. Clark. I have not had the privilege of knowing Mr. Clark intimately or very long but he is a man of tremendous ability and you really landed at home now on something constructive that you can give a great lift to.

I refer to the fact that I have been on this subcommittee a long time. I was put on the subcommittee back when we didn't have any foreign aid, we didn't have any military aid or economic aid—that is where your demand for money is now. Last year there was an \$8 billion bill for the International Monetary Fund. I said I wasn't going to vote for it—and I am not talking out of school. The President called me up and said we had to pass it, we had to provide these funds. I said, "You are the Chief Executive of the Nation, you carry the responsibility." Do you actually believe all these consequences will occur? I am not talking out of turn; that is business he was talking to me.

To make a long story short, he was so convincing about the need for this aid, that he had to have it, so I voted for it.

Well, I am just illustrating now, I am not trying to explain that vote away.

We have a program here now that is constructive and provides a lasting benefit to the Nation. We must not let this effort be just dragged along or abandoned. If the committee here wants to pass a bill, I think we got to do something about it.

Now by way of illustration, some of the military experts that examined historical records in Japan, all the records about the decision of whether or not they would attack Pearl Harbor or not, he said nearly all the admirals voted "No"; but all the Army generals voted for attacking. The difference was those admirals had been here and they looked around, they visited around a lot—and they referred specifically, some of them did, to the great, great investment in water resources—our harbors and waterways. You are not going to freeze them out, you are not going to scare them off, they are resourceful people and they can meet any situation, they will never surrender to us rather than fight. They will fight.

Well, it made an impression on me and I followed this program through these years—these constructive projects going on in various areas around the country. So water resource development is among the last things that I would strike out rather than among the first.

I am pleased you landed here right where you are, you are a resourceful man and you can do something with it. We must make the program move and we can get the votes for a program that makes a start. We can't do it all at once anyway.

I haven't got anything particular to say, but I am certainly going to stay with it and support these projects.

Mr. Chairman, I thank you.

Senator ABDNOR. Thank you.

CONSISTENT POLICY

Mr. Secretary, before we wind this up, in regard to policy, I think the policy we have has got to be consistent. By the same token, I think we must provide consistency and equity among the Corps of Engineers, Bureau of Reclamation, and the Soil Conservation Service, wouldn't you agree?

Secretary CLARK. Yes, I do, but I think we have to add the word "reasonableness," recognizing the differences among the three entities you mentioned and the purposes for which they do their construction. On the one hand, the Corps of Engineers really need not concern itself with upfront costs in the same way that Reclamation does. As I understand it, their purpose is, while they receive in-kind contributions of land and rights-of-way, they are not looking for cash in the same way that Reclamation has. So taking the differences and purposes among Soil Conservation, Reclamation, and the Corps, that is absolutely correct, particularly in this time of fiscal restraint and austerity, looking at the budget deficit that we have. But I think all the more reason, as expressed in the spirit of the President's letter, we need a flexibility to view project by project, particularly in Reclamation.

Senator ABDNOR. And the ability to pay.

Secretary CLARK. That is correct, ability to pay and repay. Looking at Reclamation from 1902 on, it has received back about 80 percent of every dollar ever spent. Obviously the Corps cannot make the same claim—it shouldn't. So we have these differences and we have to approach, we believe, each project a little differently. But I don't think we are going to get a run on our bank on the basis of stating we are going to look at it project by project.

Senator ABDNOR. I think if you would check the Corps' project history, you will find it has a huge payback, maybe 10, 11, 12 to 1 in some cases. They have a good track record.

COST-SHARING ON PROJECTS

In that regard, I am going to submit a question to you in writing so you can give us a written answer dealing with cost-sharing projects among the different groups.

Secretary CLARK. No question but that cost sharing is here. As I mentioned earlier, the days are over when the Federal Government can build a Hoover Dam all by itself. This is why we are taking the approach we are on our further study on Auburn. The beneficiaries simply have to be up front on this. But the President has stated at a Cabinet Council meeting, and we have followed it out by stating that we reject the thought of a fixed percentage as a precondition to any project going forward or even in the negotiation stages that it binds the lands whether it is in the West, Southeast, or wherever. So recognizing that one exception, we certainly agree with you and the committee on the necessity of local participation and up-front money in both planning and in construction.

Senator ABDNOR. In S. 1739, we do have cost sharing, user fees, and everything else. We think we have worked out a pretty good combination here. We hope you will take a good look at it. It has a lot of merit.

GREGORY PUMP STORAGE PROJECT, SOUTH DAKOTA

Let me get parochial because of something you mentioned on hydropower. Back out in South Dakota we are looking at a hydropower project that is probably one of the most costly that has been built in a long, long time and one of the most justified in terms of cost-benefit analysis. That is the Gregory project, and the State is attempting to organize the necessary group of utilities to share the construction costs. Some of the utilities are skeptical about this however. They prefer Uncle Sam pay the full cost, but in light of the budget deficit I don't think that is likely to happen. Do you believe it is likely the Corps of Engineers will spend over a billion dollars to construct a project like that, even though it has a great cost-benefit ratio, without some significant non-Federal funding?

Secretary CLARK. I am not in a position, Mr. Chairman, to give an opinion on that. But I certainly would be willing, if you suggest, to study it and see what Interior's relationship is.

Senator ABDNOR. I might ask you, do you think Interior and the Bureau, the administration, would go along with a project of this size? It is a good project, it has a great cost-benefit ratio. Would they be likely to go along with a billion dollar project without some non-Federal funding?

Secretary CLARK. Well, I can only compare it to——

Senator ABDNOR. It is all repayable over 50 years by power revenues.

Secretary CLARK. Again, I wouldn't want to speculate and thereby mislead anyone. It seems to require a little more study. A billion dollars per se; we have that magnitude in other projects. I mentioned the Auburn Dam where we have about a quarter of a billion in now and we are looking at over \$2 billion by the time that project is completed. But as far as what the formula should be, I think you just cited an example of a case where we should avoid a fixed formula, 35 percent to 65 percent, because each one of these projects is unique. While consistency is nice as a general rule, it just doesn't seem to fit so many of these projects. But I will be quite willing to look at it and get back to you.

AUBURN DAM, CALIF.

Senator ABDNOR. Fine. The Auburn project, has that been organized, and how it will be handled?

Secretary CLARK. No, Mr. Chairman. While it is an old project and will probably become older before it is completed, our approach is to work not only with Governor Deukmejian, the two Senators, and the task force to give us the openings in the five criteria I mentioned, but probably more important would be to bring in the three different utilities that seem to have the higher interest at the moment of getting, hopefully, as close to 100 percent as we can to the next phase of \$600 to \$700 million and again a unique project that we want to take a quick look at before proceeding to any further budgeting. We have a slight amount in the budget, but it is minimal this year.

SUBMITTED QUESTIONS

Senator ABDNOR. Any other questions? I know the Secretary would like to be excused. We will have some questions in writing that we will be submitting. We thank you very much.

Secretary CLARK. Thank you, Mr. Chairman. I will certainly work with you on this and I would hope at any time we can answer questions even beyond today.

Senator ABDNOR. Let's take a 3-minute recess before proceeding with the Bureau of Reclamation.

[Whereupon, a short recess was taken.]

[The submitted questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR ABDNOR

Water Policy - Objectives

Question: Could you explain the Administration's objectives and policy in the area of water resources development?

Answer: The objective is to identify water needs, find solutions, and implement action plans to meet the Nation's water needs. The cornerstone for water development in this Nation has, for many years, been one of partnerships between the Federal government, States, individual water user groups, and other project beneficiaries. Traditionally, many Federal water project beneficiaries have repaid the construction cost of their project. I think we all agree that new partnership arrangements will be necessary to finance additional projects in the future due to increased cost and budgetary constraints. As the President indicated in his recent letter to Senator Laxalt, he has established a national water project financing policy which will allow us to get on with the job of completing projects where commitments have already been made and undertake new construction starts to meet the country's future water development needs. The new policy recognizes the Federal responsibility for water developments will vary from region to region due to geography, climate, and economic and fiscal conditions. The policy also recognizes that the Federal government has made prior commitments to individual states with regard to water development within their borders. Therefore, we believe that the national objectives will be best achieved by encouraging each agency to negotiate, within the limits of existing law, the cost-sharing arrangements for new projects on a case-by-case basis.

Water Policy - Equity and Consistency

Question: How does this policy insure consistency and equity by project purpose and from region to region?

Answer: A workable plan must recognize that water development needs, geography, climate, economy, fiscal capacity, and Federal interests all vary from State to State, and from region to region. Furthermore, the Federal Government has made prior commitments to individual States with regard to water development within their borders.

Within this framework, consistency and equity will be strived for by each agency within their respective legal constraints. It may be necessary to yield on consistency as a trade-off to establish equity which will require a recognition of financial capability and the severity of the problem, previous commitments and/or needs of areas being considered on a case-by-case basis.

Question: Specifically, what procedures in the new National water policy, as expressed in the President's January 24, 1984 letter, will provide consistency and equity among the Corps of Engineers, Bureau of Reclamation, and Soil Conservation Service projects?

Answer: A flexible case-by-case analysis and resulting agreement will inherently have problems of consistency. All Federal water development agencies will continue to seek out new partnership arrangements with the States and other non-Federal interests in the cost sharing of all proposed projects. Each such agency will negotiate reasonable financing arrangements.

However, as an example, the severity of the water need, non-Federal financial capability, or agency legal limitations may require different criteria among projects or agencies in order to accomplish an equitable resolution.

Cost Sharing Policy

Question: Does the Administration support cost sharing for Corps of Engineers projects on an ability-to-pay basis, similar to that for the Bureau of Reclamation projects?

Answer: With regard to up-front financing, the Administration's flexible water project cost sharing policy applies across the board to all Federal water resources development agencies. This means that financial capacity will be among the many considerations determining project-specific arrangements within the confines of existing law. Because of the great variety of problems, needs, and prior commitments we believe it is appropriate that each agency negotiate the cost-sharing arrangements for new projects.

With regard to repayment, the Bureau of Reclamation considers ability to pay only for the irrigation function of a project. Other reimbursable purposes of a project must repay entire costs. Projects of the Corps of Engineers, the Bureau of Reclamation and the Soil Conservation Service, should all be treated alike.

Question: You have clearly laid out the need for continued water resource development in your oral remarks.

How do we translate this need and new flexibility expressed by the Administration into the broad consensus necessary to carry out an effective national water resource development effort?

Answer: We would hope that a policy that focuses on the job of completing projects where commitments have already been made, undertakes new construction starts to meet the country's future needs, and at the same time recognizes diversity between competing project areas, would generate national consensus.

COST SHARING OF DAM SAFETY PROJECTS

Question: Mr. Secretary, in your prepared statement you addressed cost-sharing as it relates to dam safety projects. It is a little unclear if you are talking about all economic benefits, or just the additional economic benefits which would be realized if dam safety modifications were accomplished. Could you clarify the Administration's policy in this regard?

Answer: We believe that the Federal Government is responsible and should finance the cost of repairing the unsafe aspects of a dam structure. When funds are spent beyond the amount necessary to make the dam safe and this expenditure generates new benefits, the beneficiaries should be responsible for this incremental expenditure. Appropriate financing and repayment arrangements will be negotiated to discharge this beneficiary responsibility.

Water Policy — Financing

Question: What is the Administration's policy regarding project financing?

Answer: This Administration is committed to working with the States, local entities and those private sector interests concerned with water development all across America. We are rebuilding the Federal-State partnership so that we can resume water development efforts. For the purposes

of these responses "cost sharing" refers to the financing and repayment of construction costs and other costs necessary to bring a project on line. "Financing" refers to the provision of up-front money and other resources necessary for project planning and development.

By considering each project individually, we believe cost sharing will be fair, equitable, and at the same time, fiscally responsible. All Federal water development agencies will continue to seek out new partnership arrangements with the States and other non-Federal interests in cost sharing of all proposed projects. Under the President's policy each such agency will continue to negotiate reasonable financing arrangements within the limits of existing laws governing their operations.

Because each water project is unique, I don't feel that a fixed formula is an appropriate means of determining non-federal contributions during project construction. Every state has unique problems, fiscal capacities, and in some cases prior federal commitments must be considered in this process.

Water project financing is explained in the President's letter to Senator Laxalt of January 24, 1984.

Question: Do you believe project financing should vary depending on the financial condition of the local area?

Answer: If by project financing, you are referring to repayment, the answer is no. We are tightly controlled by existing law for repayment. However, if you are referring to up-front financing, we believe that local financial condition along with resource alternatives, climate, needs, and geography are factors that require a flexible case-by-case approach that recognizes the real world situations. Additionally, the Federal government has, in many cases, made commitments to states regarding water development within their borders and those commitments must also be factored in.

Question: Is the Administration still insisting on up-front financing, or does the "new flexibility" articulated by the Administration allow for negotiations to determine if there will be up-front financing? Also, is the repayment period flexible?

Answer: In most cases some form of up-front financing of water projects is going to be a matter of necessity. The fiscal limitations with which we are faced require financial partnerships. However, the President's policy is flexible enough to allow exceptions to this general rule in those cases where it is appropriate due to overriding Federal responsibilities or unique circumstances.

Project repayment practices are for the most part governed by existing law and are not subject to negotiation. However, where that is not the case negotiations will determine the approach.

Water Project Authorization Bills

Question: Now, both the Senate and House of Representatives have reported out major omnibus authorization bills, S. 1739 and H.R. 3678. Can the Administration support, in a general way, either of these bills? Which approach to project cost sharing does the Administration support?

Answer: The Department of the Interior has testified before House Subcommittee on Water and Power Resources in opposition to H.R. 3678. Although we realize that there are certain elements of the legislation that are needed, many elements and proposed programs are not appropriate Federal responsibilities and the high cost of the legislation cannot be supported in this time of budgetary constraint. The cost sharing approach is similar

in the two bills in that they both propose a fixed formula approach which the Administration cannot support because a fixed formula does not have the flexibility of the President's cost sharing policy to accommodate the varying needs, fiscal conditions and Federal responsibilities and commitment of the various competing areas throughout the Nation.

Question: What changes would the Administration recommend which would make the legislation acceptable?

Answer: The Department of the Interior has presented its position on H.R. 3678 before the House Subcommittee on Water and Power Resources. While we oppose the bill, we also recommend changes which we believe must be made to make the legislation acceptable to Interior. However, we deferred to the Department of the Army on many sections of the bill and their position must be taken into consideration. We are presently preparing an Interior Department position on S.1739 and will provide it to the Congress in the near future.

QUESTIONS SUBMITTED BY SENATOR HATFIELD

WATER POLICY

Question: Does the Administration make any distinction in Eastern water projects and Western water projects?

Answer: In establishing a water project cost sharing policy the Administration sought to recognize that water development needs, geography, climate, economy, fiscal capacity, and federal responsibility all vary from state to state, and region to region. The objective is to identify and meet the nation's water needs, not to discriminate against certain areas of the nation.

The water project cost-sharing policy adopted by President Reagan applies across the board to all federal water resource development agencies, including the Department of the Interior's Bureau of Reclamation and the U.S. Army Corps of Engineers.

Question: On January 24, 1984, President Reagan wrote to Senator Laxalt and several other Western Senators setting forth a "more flexible approach to water projects cost sharing and financing". My first concern is one of perception--the idea of the President responding to 15 Western Senators, agreeing to their concerns and approach and thereby establishing national policy. How do you expect to translate this "Western Leaning" into a national Policy?

Answer: The water policy is not considered as western policy but responsive to national needs. The policy was fashioned to be sufficiently flexible to be used as a national policy.

Question: Now, the Administration in the past has proposed legislation to establish fixed minimum level of local cost sharing for such things as municipal and industrial water supply, flood control, recreation, and commercial navigation. Most of these efforts come under the Corps of Engineers program. Is the fixed-minimum approach of the past still operative with the Corps of Engineers, or does this new flexible, project-by-project approach apply to all water resource development agencies?

Answer: The water project financing and cost-sharing policy adopted by President Reagan applies across the board to all federal water resource development agencies, including the Department of the Interior's Bureau of Reclamation and the U.S. Army Corps of Engineers. In adopting this policy, President Reagan rejected the imposition of arbitrary percentages for establishing cost-sharing partnerships and opted for an approach which is flexible, fair, and at the same time, fiscally responsible.

Grand Coulee Dam

Operation and Maintenance of Power Facilities

I am interested in the safety factors and conditions of the Bureau of Reclamation's facilities around the country. I know that a couple of years ago, there was a rather serious fire at the Grand Coulee Dam which caused significant damage and could have threatened the ability on that situation, but I am interested in the Bureau's assessment of its current overall needs.

Question: Are there facilities, such as Grand Coulee, where you need to do repair or replacement work at this time?

Answer: Yes. Repair and replacement work is a major element in our program of operating and maintaining power facilities. Our power facilities range in age from new to over 70 years old, with many plants now approaching 40 years. Major repair and replacement work is required to keep these facilities operating, and this activity is expected to grow as major components reach the end of their expected service life. We draw on the utility industry's collective experience and our internal evaluations of conditions to anticipate repair and replacement needs.

Question: Could you give us some examples of those facilities, the kind of repair work that needs to be done, and any projected cost estimates you may have?

Answer: The following examples identify the kind of work and estimated costs for the repair and replacement activities which are critical to production of power and need to be accomplished at this time: Repair of the Boulder Canyon Project penstock tunnels, \$400,000; Replace or repair generator and transformer valves and repair draft tube and fixed wheel gates at the Parker-Davis Project, \$120,000; Replacement of generator windings, station service systems, and power circuit breakers in the Central Valley Project, California, \$2,216,000; Replace transformers and turbine runners at the Flatiron Powerplant, \$900,000; Replace power cables, potheads, and surge protectors at Green Mountain Powerplant, \$100,000; Replace station service transformers at Anderson Ranch Powerplant, \$35,000; Begin turbine runner replacement, turbine repair, and replace power cables at Minidoka Powerplant, \$176,000; Continue replacement of main unit transformer, replace pumping unit stator windings, repair ring seal gates and discharge tubes at Grand Coulee project, \$3,225,000; Replace generator windings at Roza Powerplant, \$300,000; replace turbine runners at Fremont Canyon Powerplant, unit circuit breakers at Kortes Powerplant, rewind Kortes generator - all in the North Platte River project area, \$1,050,000; Repair voltage regulators, replace power and control cables, replace power distribution breakers, and repair governor assemblies at Yellowstone Powerplant, \$113,000.

Question: What are the greatest safety factors involved in these hydroelectric-producing facilities?

Answer: The greatest safety factors involved in our hydroelectric-producing facilities are the work practices of employees and the potential risks of in-service failures of energized equipment. We have an aggressive education and safety program to address the safety factors involved with employees working in the powerplant environment. We continue to improve our methods to estimate the suitability of equipment for continued service; however, our ability to predict in-service failures is still mostly intuitive. In-service failures of energized, high power equipment is usually violent, causing considerable damage. We seek to minimize the risks of in-service failures through replacement of questionable equipment or components.

Question: Are there serious threats of disruption of power at various facilities?

Answer: There are always threats of disruption of power at electrical facilities due to premature in-service failures of equipment, but we have attempted to minimize such threats in our ongoing replacement and preventative maintenance program. If scheduled replacement and maintenance are delayed, such as could result from budgetary constraints, this could increase the risk of power disruption. A failure of equipment at key generation sites such as Grand Coulee can cause widespread disruption of power. The specific conditions within a major power distribution area at the time of a failure will determine the consequences of the disruption. Typically, the heavier loaded systems are more vulnerable to in-service failures, and the consequences of disruption are higher,

Question: Are there threats to the environment at these facilities? What sorts of threats might there be to the environment?

Answer: Yes, however, during the last decade we have implemented measures to protect the environment. Our program has included such activities as erecting oil containment facilities to prevent oil from power system equipment from entering waterways, replacement of power system equipment containing PCB's, collecting accumulations of oil in powerplant sumps, and equipping and training personnel to handle oil spills and hazardous materials.

Question: Does your 1985 budget request include funds that would be used for repairs or replacements of potentially faulty cable systems or electric power production systems? Or, are those repairs and replacements paid out of revenues generated through the production of electrical power?

Answer: Yes, Reclamation's fiscal year 1985 budget request includes funds for the maintenance and replacement of various electric power production facilities. As part of our preventive maintenance program we are continually performing maintenance on our power production facilities to maintain efficient and reliable operations. With respect to cable systems, funds are programmed in 1985 for replacement of power cables, potheads, and surge protectors at Green Mountain Powerplant. In addition to the routine maintenance program, the 1985 budget request includes funds for rewinding of main generators, the uprating of several of our power plant facilities, replacement of power transformers and circuit breakers, replacement of turbine runners, replacement and addition of station service units, modification of fire control system and modernization of supervisory control and communication systems.

The operation, maintenance, and replacement program of the Colorado River Storage Project and the Colorado River Basin Project are funded from revenue collections and do not require the direct appropriation of funds. The remaining portion of our power operation and maintenance program is funded by direct appropriation.

Cable Systems

Question: As I recall from the 1981 incident, many of the cable systems have been supplied by foreign concerns. Have there been American manufacturers competing for that business and if so, what factors have made the difference in the selection of foreign companies?

Answer: Within the last 2 years the Bureau has undertaken approximately ten major acquisitions for cable or cable systems (including transmission lines). In all cases, the cable was supplied by U.S. firms and manufactured in the U.S.

Question: Without more formal, uniform cost sharing and financing requirements, aren't you opening yourself to criticism or favoritism or charges of providing sweetheart deals for politically important projects?

Answer: That may result but we feel it is better to attack the problem and tailor the solutions to the needs. As the President indicated in his recent letter to Senator Laxalt, the goal of this new policy is to establish a national water project financing policy which will allow us to get on with the job of completing projects where commitments have already been made and undertaking new construction starts to meet the country's future needs. We are willing to take the risk of criticism. Because of the great variety of problems, needs, and prior commitments, we believe it is appropriate that each agency negotiate the cost-sharing arrangements for new projects on a case-by-case basis.

Question: Another concern is that this policy continues to favor those states or localities which can afford to provide a larger cost sharing percentage. How do you plan to provide balance and attention of those areas that cannot afford to participate at higher levels?

Answer: Balance and attention will best be provided by avoiding a rigid cost sharing formula. Tailoring cost sharing and financing arrangements to individual situations on a case-by-case basis is the key. Cost sharing ability is only one criterion used to develop a recommended water development program.

Question: Will budget recommendation be made solely on how much non-Federal participation is involved?

Answer: No, non-Federal financing participation in potential water projects will be significant but not the only consideration in developing budget recommendations. Other factors will include items such as local need for the project, urgency of the problem, local support, prior commitments, economic feasibility of the project, and other national needs. All of these factors will be evaluated for projects being considered, on a case-by-case basis.

Question: How will the Administration incorporate consistency and equity which is so important to any meaningful national policy?

Answer: Consistency and equity will be strived for by each agency within their respective legal constraints. It may be necessary to yield on consistency as a tradeoff to establish equity which will require a recognition of financial capability and the severity of the problem and/or needs of areas being considered on a case-by-case basis.

Pending Water Project Legislation

Question: Now, both the Senate and House of Representatives have reported out major omnibus Authorization bills, S. 1739 and H.R. 3678. What is your assessment, as the Administration spokesman for water resource development, as to the prospects for enactment of an authorization bill in this session?

Answer: We support the concept of encouraging new partnership arrangements and are optimistic that Congress will be comfortable with the cost sharing and financing policy announced by the President. We are gratified that Congress is now addressing the key issues related to water project cost sharing and financing, and will support authorizations that meet the President's cost sharing and economic policies.

Question: In an effort to address the critical water development needs of the Nation, the House of Representatives has passed and the Senate Appropriations Committee has reported out H.R. 3958, an appropriation bill to fund a limited number of high priority water projects. The Senate Committee reduced substantially the size of the House passed measure and appropriated funds subject to authorization. In light of the President's January 24, 1984, letter and the scaled back nature of H.R. 3958, can we assume Administration support of the Senate effort to pump life back into the water resource construction program and have projects funded when authorizations are clear? If not, what changes in the Senate Committee action on H.R. 3958 would make it acceptable?

Answer: The Administration is supportive of authorization and funding of new water resources project construction starts insofar as they comply with applicable Administration guidelines and policies. The Department of the Interior does support the funding for a new construction start for the three Bureau of Reclamation projects included in H.R. 3958 by the Senate Committee on Appropriations. The Department of the Interior defers to the Department of the Army with regard to Administration support for the 24 Corps of Engineers projects which would be funded in Fiscal Year 1985 by H.R. 3958.

BUREAU OF RECLAMATION
STATEMENT OF ROBERT BROADBENT, COMMISSIONER

ACCOMPANIED BY:

ROBERT OLSON, ASSISTANT COMMISSIONER, PLANNING AND OPERATIONS

BILLY SPILLERS, ACTING ASSISTANT COMMISSIONER, ADMINISTRATION

WILLIAM C. KLOSTERMEYER, ACTING DIRECTOR OF BUDGET, DEPARTMENT OF THE INTERIOR

INTRODUCTION OF WITNESSES

Senator ABDNOR. Commissioner Broadbent, we welcome you again. We always enjoy working with you. Congratulations on your new position to be. We hope in the near future it is going to be official. Again, welcome to the committee. Please proceed.

Mr. BROADBENT. Mr. Chairman and members of the committee, first of all I would like to introduce the Acting Commissioner of Reclamation, Bob Olson. The first thing I can say about him is that he was born in South Dakota. [Laughter.]

Senator ABDNOR. That is right. He is a good person for the job.

Mr. BROADBENT. We are happy to have him here and we are happy to have him as Acting Commissioner of Reclamation.

BUDGET FOR THE BUREAU OF RECLAMATION

If I could, I would like to take maybe a couple of minutes just for a brief overview of the Bureau of Reclamation's budget—it was covered very well by the Secretary—and just indicate to you again that we feel that it is a good budget for the Bureau. It is a good budget for water resource development. We recognize that there are some problems in it that the committee may want to address and we recognize that they may want to make some adjustments in the budget. We would only indicate to you that we would hope that the supplemental for new starts and the new starts that are in the 1985 budget can move ahead and recognize that Congress itself may work its will as it may decide on the priorities for those new starts.

PREPARED STATEMENT

I think, Mr. Chairman, with that, I would like to submit my prepared statement for the record and leave any other questions open for yourself and members of your committee.

Specifically, I think we can address those questions that were raised by Senator Burdick and would be happy to do so.

[The statement follows:]

STATEMENT OF ROBERT BROADBENT

THANK YOU, MR. CHAIRMAN, FOR THE OPPORTUNITY TO APPEAR BEFORE YOU AND THE COMMITTEE TO SPELL OUT THE HIGHLIGHTS OF THE BUREAU OF RECLAMATION'S BUDGET REQUEST FOR FISCAL YEAR 1985. WE FEEL OUR PROGRAMS HAVE CONTRIBUTED TO THE STRENGTHENING OF THE ECONOMY AND PROVIDE MUCH NEEDED RESOURCES TO THE NATION.

BEFORE I GET TO OUR PROPOSED BUDGET, PERMIT ME A MOMENT TO TELL YOU HOW PROUD I AM OF THE RECLAMATION PERSONNEL AND THEIR PERFORMANCE DURING THE UNPRECEDENTED HIGH FLOWS DOWN THE COLORADO RIVER LAST SUMMER. IT WAS A UNIQUE COMBINATION OF CIRCUMSTANCES THAT CAUSED RECORD VOLUMES TO POUR INTO RECLAMATION'S DAMS ON THE COLORADO RIVER AND ITS TRIBUTARIES. IT WAS A DIFFICULT TIME, BUT OUR PEOPLE PERFORMED SUPERBLY, CONTROLLING THE WATER AND MINIMIZING DAMAGE. BOTH PERSONNEL AND FACILITIES WERE PUT TO THE TEST BUT THEY DEMONSTRATED THAT THE SYSTEM WORKS AS DESIGNED.

FACING THE DICHOTOMY OF MINIMIZING BUDGETARY PRESSURES WHILE AT THE SAME TIME MOVING AHEAD ON PROGRAMS SUCH AS RECLAMATION, PRESENTS A DIFFICULT TASK.

HOWEVER, THE RECLAMATION PROGRAM HAS DISTINGUISHED ITSELF AMONG GOVERNMENT PROGRAMS BY CONSTRUCTING PROJECTS THAT WILL RETURN TO THE UNITED STATES TREASURY ABOUT 81 PERCENT OF THE COST INVESTED. OUR ACCOMPLISHMENTS ARE A GOOD INDICATOR OF THE CONTRIBUTIONS RECLAMATION IS MAKING TO OUR NATION. THE 1982 STATISTICAL DATA, THE LATEST AVAILABLE, SHOW:

HYDROELECTRIC GENERATION AMOUNTED TO 49 BILLION
KILOWATT HOURS, THE EQUIVALENT OF 80.7 MILLION BARRELS
OF OIL; OR 21.8 MILLION TONS OF COAL; OR 483 BILLION
CUBIC FEET OF NATURAL GAS.

ELECTRICAL ENERGY REVENUES WERE \$390 MILLION, A
2 PERCENT INCREASE OVER THE PREVIOUS YEAR.

IRRIGATION WATER DELIVERIES TOTALLED 28.8 MILLION
ACRE-FeET (9.4 BILLION GALLONS) AND MUNICIPAL AND
INDUSTRIAL WATER DELIVERIES TOTALLED 1.9 MILLION
ACRE-FeET TO SERVE 16 MILLION PEOPLE.

FLOOD CONTROL BENEFITS AMOUNTED TO \$106.6 MILLION.

RECLAMATION RESERVOIRS AND OTHER FACILITIES SUPPORTED
OVER 42.1 MILLION VISITOR DAYS FOR RECREATION.

FOOD, FIBER, AND FORAGE CROPS TOTALLED \$7.3 BILLION.

IN 1983, 2,986 WORKYEARS OF CONTRACTOR
EMPLOYMENT WERE UTILIZED.

ACTIVITIES RELATED TO RECLAMATION PROJECTS IN 1982 HAVE
CONTRIBUTED \$3.3 BILLION IN FEDERAL TAX REVENUES
AND STATE AND LOCAL REVENUES WERE APPROXIMATELY
\$1.5 BILLION.

THE SOUNDNESS OF THE INVESTMENT IN THE RECLAMATION PROGRAM IS WELL PROVEN BY
ITS PAST. THE IMMEDIATE AND LONG-TERM NEEDS ARE WELL DOCUMENTED TO SUPPORT
WATER RESOURCES DEVELOPMENT.

OUR FISCAL YEAR 1985 REQUEST FOR THE BUREAU OF RECLAMATION TOTALS
\$1,079,431,000. THIS IS AN INCREASE OF 11.7 PERCENT OVER FISCAL YEAR 1984,
WHICH TOTALLED \$966 MILLION.

THE \$1.079 BILLION IS ALLOCATED AS FOLLOWS:

\$764.1 MILLION WOULD GO FOR CONSTRUCTION

\$149.7 MILLION WOULD BE FOR OPERATION AND MAINTENANCE

\$ 67.5 MILLION IS FOR THE LOAN PROGRAM

\$ 35.7 MILLION IS ALLOCATED FOR GENERAL INVESTIGATION

\$ 62.4 MILLION WOULD BE FOR ADMINISTRATIVE EXPENSES, EMERGENCY FUND
AND PERMANENT APPROPRIATIONS

THE CONSTRUCTION PROGRAM OF \$764.1 MILLION WILL CONTINUE ONGOING WORK ON 71 MULTI-PURPOSE PROJECTS AND 4 PRECONSTRUCTION PROJECTS. IN ADDITION, WE ANTICIPATE INITIATING CONSTRUCTION ON TWO MAJOR AND SEVEN LESSER NEW WATER PROJECTS IN FISCAL YEAR 1985.

THE CONSTRUCTION BUDGET, BEFORE THE APPLICATION OF UNDERFINANCING IS SUB-DIVIDED AS FOLLOWS:

- \$769.9 MILLION FOR REGULAR PROJECT CONSTRUCTION
- \$34.6 MILLION FOR REHABILITATION AND BETTERMENT
- \$14.0 MILLION FOR SAFETY OF DAMS
- \$32.8 MILLION FOR DRAINAGE AND MINOR CONSTRUCTION
- \$7.9 MILLION FOR RECREATION, FISH AND WILDLIFE FACILITIES AND
- \$4.3 MILLION FOR PRECONSTRUCTION ACTIVITY.

OUR TWO NEW STARTS ARE THE BOULDER CANYON PROJECT IMPROVEMENTS IN ARIZONA AND NEVADA AND THE PALISADES POWERPLANT ENLARGEMENT IN IDAHO. THE BOULDER CANYON PROJECT IS ALSO INCLUDED IN OUR PRECONSTRUCTION PROGRAM IN ORDER TO PREPARE IT FOR CONSTRUCTION LATER IN THE FISCAL YEAR.

ALSO INCLUDED IN THIS BUDGET IS A SUPPLEMENTAL REQUEST TO START THREE NEW CONSTRUCTION PROJECTS IN FISCAL YEAR 1984 PLUS SECOND YEAR FUNDING IN FISCAL YEAR 1985. THESE PROJECTS ARE THE HEADGATE ROCK HYDROELECTRIC PROJECT IN ARIZONA, THE SANTA MARGARITA PROJECT IN CALIFORNIA, AND THE BUFFALO BILL DAM MODIFICATION IN WYOMING WHERE THE STATE OF WYOMING HAS APPROPRIATED \$47.0 MILLION TOWARD COST SHARING.

WITH REGARD TO THE ONGOING PROGRAM, THIS BUDGET PROPOSAL ALLOCATES \$187.6 MILLION FOR THE CENTRAL ARIZONA PROJECT. CONSTRUCTION WILL BE SUFFICIENTLY COMPLETED ON THE GRANITE REEF AND SALT-GILA AQUEDUCTS AND A PORTION OF THE TUCSON AQUEDUCT TO ALLOW INITIAL WATER DELIVERY TO THE PHOENIX METROPOLITAN AREA IN 1985 AND TO PINAL COUNTY IN 1986. CONSTRUCTION WILL CONTINUE ON THE GRANITE REEF, SALT-GILA AND TUCSON AQUEDUCTS, INDIAN AND NON-INDIAN DISTRIBUTION SYSTEMS, TRANSMISSION DIVISION, AND THE SUPERVISORY CONTROL SYSTEM.

THE \$9.1 MILLION FOR THE HEADGATE ROCK HYDROELECTRIC PROJECT IN ARIZONA WILL PROVIDE FOR THE AWARD OF CONTRACTS FOR CONSTRUCTION OF THE POWERPLANT STRUCTURE AT THE EXISTING HEADGATE ROCK DAM AND FURNISHING AND INSTALLING THE THREE TURBINE GENERATING UNITS.

UNDER TITLE I OF THE COLORADO RIVER BASIN SALINITY CONTROL PROJECTS, WE ARE REQUESTING \$30.5 MILLION. THIS WILL PERMIT WORK TO CONTINUE ON THE MEMBRANE EQUIPMENT CONTRACTS AS WELL AS CONTINUE WORK TOWARD COMPLETION OF THE YUMA DESALTING PLANT.

OUR FUNDING REQUEST FOR THE CENTRAL UTAH PROJECT AMOUNTS TO \$110.4 MILLION. THE MAJOR UNIT OF THIS PROJECT IS THE BONNEVILLE UNIT WHERE WE WILL CONTINUE CONSTRUCTION OF STAGE II, UPPER STILLWATER DAM, AND CONTINUE PROCESSING OF AGGREGATE FOR THIS DAM, AND CONSTRUCTION ON JORDAN AQUEDUCT REACH 4 AND ALPINE AQUEDUCT REACH 3. OTHER MAJOR ITEMS INCLUDE THE CONSTRUCTION OF HADES CREEK STREAM INLET, BREACHING OF STRAWBERRY DAM, AND CLEARING STRAWBERRY RESERVOIR. WORK WILL BE COMPLETED ON STILLWATER TUNNEL AND SOLDIER CREEK. THE BONNEVILLE UNIT REQUEST IS \$104.8 MILLION, BY FAR THE MAJOR PORTION OF THE CUP FUNDING.

MCPHEE DAM, THE PRINCIPAL STORAGE UNIT OF THE DOLORES PROJECT IN COLORADO, WILL BE COMPLETED IN FISCAL YEAR 1984. CONSTRUCTION WILL CONTINUE ON THE GREAT CUT PUMPING PLANT AND THE DOVE CREEK CANAL, REACH I. CONSTRUCTION WILL START ON DOVE CREEK CANAL REACH II, THE FAIRVIEW AND CAHONE PUMPING PLANTS AND LATERALS, AND PUMPING PLANT SUBSTATIONS. FUNDS ARE ALSO INCLUDED FOR THE CONTINUATION OF THE ARCHEOLOGICAL CONTRACT. THE TOTAL FUNDS REQUESTED FOR THE DOLORES PROJECT AMOUNT TO \$39.1 MILLION.

RIDGWAY DAM, PART OF THE DALLAS CREEK PROJECT, IN COLORADO, IS CURRENTLY UNDER CONSTRUCTION. MOST OF THE \$13.6 MILLION REQUESTED FOR THIS PROJECT WILL CONTINUE WORK ON STAGE II. DATA COLLECTION WILL ALSO CONTINUE ON THE RIDGWAY POWERPLANT AND TRANSMISSION LINE.

THE MAJOR PORTION OF THE \$45.0 MILLION REQUESTED FOR THE BRANTLEY PROJECT WILL BE USED TO START CONSTRUCTION OF BRANTLEY DAM. THE DAMSITE IS ON THE PECOS RIVER ABOUT MIDWAY BETWEEN ARTESIA AND CARLSBAD, NEW MEXICO. THE RESERVOIR WILL PROVIDE FLOOD CONTROL STORAGE NOT PRESENTLY AVAILABLE AND WILL ELIMINATE THE THREAT OF FAILURE OF McMILLAN DAM BECAUSE OF AN INADEQUATE SPILLWAY. OTHER WORK DURING THE YEAR WILL INCLUDE RELOCATION OF A RAILROAD, CONSTRUCTION OF ACCESS ROADS, AND IMPROVEMENTS TO A WATERFOWL HABITAT.

McGEE CREEK PROJECT IN SOUTHEASTERN OKLAHOMA WILL BECOME OPERATIONAL IN FISCAL YEAR 1985 WITH THE COMPLETION OF McGEE CREEK DAM. FUNDS AMOUNTING TO \$19.0 MILLION ALSO WILL ALLOW COMPLETION OF A PUMPING PLANT, AQUEDUCT, AND TRANSMISSION FACILITIES. THE McGEE CREEK PROJECT WILL PROVIDE SUPPLEMENTAL MUNICIPAL AND INDUSTRIAL WATER FOR OKLAHOMA CITY, ATOKA, AND PARTS OF SOUTHEASTERN OKLAHOMA. ACTIVITIES ON THE McGEE CREEK PROJECT HAVE CONTRIBUTED SIGNIFICANTLY TO THE SUCCESS OF A RURAL DEVELOPMENT PROGRAM IN THE AREA.

FISCAL YEAR 1985 FUNDS AMOUNTING TO \$16.9 MILLION WILL BE USED TO COMPLETE TWO STAGES OF A CANAL AND LATERAL COLLECTION SYSTEM ON THE CLOSED BASIN DIVISION OF THE SAN LUIS VALLEY PROJECT, IN COLORADO. GROUND WATER PRESENTLY NOT BENEFICIALLY CONSUMED WILL BE PUMPED FROM SALVAGE WELLS AND DELIVERED TO THE RIO GRANDE THROUGH THE DISTRIBUTION SYSTEM TO HELP COLORADO MEET ITS COMMITMENTS UNDER THE RIO GRANDE COMPACT.

CONSTRUCTION OF RECREATION FACILITIES FOR THE NUECES RIVER PROJECT IN TEXAS WILL CONTINUE WITH FUNDS OF \$5.3 MILLION REQUESTED FOR THE 1985 FISCAL YEAR. THE RECREATION FACILITIES WILL BE OPERATED BY THE TEXAS PARKS AND WILDLIFE DEPARTMENT. THE CITY OF CORPUS CHRISTI AND THE NUECES RIVER AUTHORITY ASSUMED OPERATION OF CHOKE CANYON DAM LAST FALL.

THE VELARDE COMMUNITY DITCH PROJECT IN NORTHERN NEW MEXICO WAS AUTHORIZED AND FUNDED IN FISCAL YEAR 1984. THE \$1.6 MILLION REQUEST WILL PERMIT CONTINUATION OF CONSTRUCTION OF DIVERSION DAMS TO REPLACE ROCK AND BRUSH STRUCTURES ON THE RIO GRANDE IN RIO ARriba COUNTY IN NORTHERN NEW MEXICO.

WE ARE REQUESTING \$14.8 MILLION FOR THE CHIEF JOSEPH DAM PROJECT, OROVILLE - TONASKET UNIT IN WASHINGTON. CONSTRUCTION WILL CONTINUE ON THE REPLACEMENT OF THE OBSOLETE OSOYOOS DISTRIBUTION SYSTEM WITH A PRESSURE PIPELINE SYSTEM. WORK WILL BE INITIATED ON FACILITIES FOR THE ENHANCEMENT OF THE STEELHEAD FISHERY.

ON THE COLUMBIA BASIN PROJECT IN WASHINGTON \$12.6 MILLION WILL BE FOR THE CONSTRUCTION OF A DRAINAGE SYSTEM TO IMPROVE IRRIGATION EFFICIENCY. A CONTRACT WILL BE AWARDED FOR ENLARGEMENT OF THE WEST CANAL. PRECONSTRUCTION WORK WILL CONTINUE FOR THE DEVELOPMENT OF THE REMAINING 530,000 ACRES WHICH WILL REQUIRE AMENDED REPAYMENT ARRANGEMENTS. AT THE THIRD POWERPLANT, WORK WILL CONTINUE ON THE DOWNSTREAM RIVERBANK STABILIZATION TO PREVENT DAMAGE BY FLUCTUATING WATER LEVELS DURING THE POWERPLANT'S PEAKING OPERATION. \$40.6 MILLION IS ALLOCATED FOR THIS WORK. A CEREMONY WAS HELD LAST JULY 16 COMMEMORATING THE 50TH ANNIVERSARY OF THE START OF CONSTRUCTION ON GRAND COULEE DAM AND THE DEDICATION OF THE THIRD POWERPLANT.

WE ARE REQUESTING \$3.7 MILLION FOR CONSTRUCTION IN NEBRASKA FOR STAGE III OF CALAMUS DAM ON THE NORTH LOUP DIVISION. WORK WILL BE COMPLETED AND INITIAL FILLING OF THE RESERVOIR WILL BEGIN IN FISCAL YEAR 1985. FISH AND WILDLIFE MITIGATION MEASURES WILL CONTINUE. CONSTRUCTION WILL BE COMPLETED ON MIRDAN CANAL, SECTION 1. CONSTRUCTION WILL CONTINUE ON DIVERSION WORKS, PUMPING PLANT, CANALS, LATERALS, AND SURFACE DRAINS. THE TOTAL REQUEST FOR THE NORTH LOUP DIVISION IS \$30.5 MILLION.

IN CALIFORNIA, WORK WILL CONTINUE ON ALL REMAINING MAJOR CONTRACTS INVOLVING THE SAN FELIPE DIVISION OF THE CENTRAL VALLEY PROJECT, INCLUDING PACHECO PUMPING PLANT, PACHECO CONDUIT SECTION 2, SANTA CLARA CONDUIT SECTION 2, HOLLISTER CONDUIT SECTION 2, COYOTE PUMPING PLANT, SAN JUSTO DAM AND RESERVOIR, AND INSTALLATION OF CONTROL AND MONITORING EQUIPMENT. FUNDING FOR THIS PROJECT AMOUNTS TO \$54.3 MILLION.

PENDING APPROPRIATE LEGISLATIVE ACTION AND COST SHARING ARRANGEMENTS,

DESIGN WORK FOR THE AUBURN-FOLSOM SOUTH UNIT COULD GET UNDERWAY AS COULD WORK ON THE UPSTREAM ROADS AND BRIDGES.

FOR THE SACRAMENTO RIVER DIVISION WE ARE ASKING \$ 11.6 MILLION. CONTRACTS WILL BE AWARDED FOR A TURNOUT FOR GLIDE IRRIGATION DISTRICT AND FOR A PUMPING PLANT FOR THE COLUSA COUNTY WATER DISTRICT. CONTRACTS WILL ALSO BE AWARDED FOR ENLARGING THE TENAMA-COLUSA CANAL HEADWORKS AND INSTALLATION OF A FISH SCREEN AND TRASH DEFLECTOR.

IN NORTH DAKOTA, \$53.6 MILLION WILL FUND CONSTRUCTION ACTIVITIES THAT WILL FOCUS ON THE PRINCIPAL SUPPLY WORKS AND GENERAL FACILITIES OF THE GARRISON DIVERSION UNIT. FUNDING WILL BE USED FOR CONTINUED CONSTRUCTION OF LONETREE DAM AND ASSOCIATED FACILITIES. FUNDING WILL ALSO PERMIT CONTINUED CONSTRUCTION OF THE DISTRIBUTION SYSTEM FOR THE OAKES TEST AREA. CONTRACTS WILL BE AWARDED FOR TAAYER DIKE, RESERVOIR, AND PUMPING PLANT AND OAKES CANAL. CONSTRUCTION WILL CONTINUE ON THE NEW ROCKFORD CANAL. CONTRACTS FOR CANAL LINING AND DRAINS WILL BE AWARDED AND LAND ACQUISITION FOR VARIOUS PROJECT FEATURES WILL CONTINUE.

IN WYOMING, CONSTRUCTION WILL CONTINUE ON MODIFICATIONS TO BUFFALO BILL DAM WHICH INVOLVES RAISING THE DAM 25 FEET, ENLARGING THE SPILLWAY AND CONSTRUCTING A NEW POWERPLANT. \$5.0 MILLION IS SET ASIDE FOR THIS WORK.

THE REHABILITATION AND BETTERMENT PORTION OF THE CONSTRUCTION PROGRAM IS \$34.6 MILLION, AND WITH THESE FUNDS, WORK ON 16 UNITS WILL EITHER BEGIN OR CONTINUE. ON OLDER PROJECTS WHICH HAVE BEEN IN OPERATION FOR MANY YEARS, IT HAS BEEN FOUND THAT SOME STRUCTURES ARE IN NEED OF MAJOR REPAIR. IN ADDITION, THERE HAVE BEEN MANY CHANGES IN LAND USE METHODS OF IRRIGATION AND TYPES OF CROPS RAISED. TO PLACE THESE OLDER PROJECTS ON A BASIS COMPARABLE TO THOSE NOW BEING CONSTRUCTED, THE FACILITIES MUST NOT ONLY BE REHABILITATED BUT IMPROVED.

THE DRAINAGE AND MINOR CONSTRUCTION PORTION OF THE CONSTRUCTION PROGRAM WILL REQUIRE ABOUT \$32.8 MILLION AND INVOLVE 26 PROJECTS. WE ARE REQUESTING

\$16.5 million for the Colorado River Front Work and Levee System. Contracts will be awarded for armoring the unprotected levees between Davis Dam and Needles, California, and for repair of facilities damaged by the 1983 high flows of the river.

The \$14.0 million requested for the Safety of Dams program in fiscal year 1985 provides for investigations, modification reports, and design work for 17 dams. In Utah, construction work will begin on the modification of the Newton Dam spillway in order to safely pass the design flood flows.

A contract is scheduled to be let for similar work at Fruitgrowers Dam in Colorado. Hydrometeorological data gathering and warning systems will be acquired and installed at Altus Dam in Oklahoma.

Other construction contracts will be awarded for work on Horsetooth Dam in Colorado, Pactola Dam in South Dakota, Island Park Dam in Idaho, and Stony Gorge Dam in California. Preconstruction work will be underway on Heart Butte Dam in North Dakota.

\$8.0 million of the Bureau construction budget will be directed toward recreation and fish and wildlife activities. Included will be the completion of the fish hatchery building and recreation facilities at Pueblo Dam in Colorado. Funding of \$2.4 million is to continue construction of facilities at Strawberry and Upper Stillwater Reservoirs and to complete work on facilities at Currant Creek Reservoir, all in Utah. At Ridgway Dam in Colorado, \$2.3 million is requested to continue construction of the recreation portion of the program. \$2.1 million is earmarked for recreational facilities at McPhee Reservoir in Colorado and to acquire land and rights for the McPhee Wildlife Management Area.

For preconstruction activities in fiscal year 1985, we are asking for \$4.4 million. Work will continue on the American Canal Extension near El Paso, Texas. This project will salvage water, facilitate deliveries to Mexico under the 1906 Treaty, and enhance public safety by discontinuing use of a portion of the Franklin Canal that is located in a congested part of El Paso.

THE \$149.7 MILLION REQUEST FOR THE OPERATION AND MAINTENANCE PROGRAM IN FISCAL YEAR 1985 REFLECTS AN INCREASE OF \$15.4 MILLION OVER THE FISCAL YEAR 1984 APPROPRIATION. A SIGNIFICANT PORTION OF THE O&M ACTIVITIES WILL BE DIRECTED TOWARD GENERATOR REWINDING AT RECLAMATION HYDROPOWER PLANTS. REPLACEMENT OF TURBINE RUNNERS AT THE FLATIRON POWERPLANT, COLORADO-BIG THOMPSON PROJECT, IN COLORADO WILL ALLOW THE GENERATORS TO BE OPERATED AT AN INCREASED CAPACITY.

MODERNIZATION OF THE POWERPLANT AT ELEPHANT BUTTE DAM, RIO GRANDE PROJECT, IN NEW MEXICO WILL BE CONTINUED AS WILL UNIT REWINDS AT TRINITY POWERPLANT AND TRACY PUMPING PLANT IN CALIFORNIA. AT THE COMPLETION OF ALL UPDATING PROGRAMS ONGOING IN FISCAL YEAR 1985 THE TOTAL POWER CAPACITY WILL BE INCREASED BY 164.5 MEGAWATTS.

WE ARE REQUESTING A TOTAL OF \$28.7 MILLION IN NEW BUDGET AUTHORITY TO CONTINUE O&M ACTIVITIES ON THE BOULDER CANYON, PARKER-DAVIS, AND YUMA AREA PROJECTS.

I MENTIONED EARLIER THE HIGH FLOWS DOWN THE COLORADO RIVER DURING THE SUMMER OF 1983 WHICH TESTED RECLAMATION'S FACILITIES. ALTHOUGH THE FACILITIES OPERATED AND PERFORMED ADMIRABLY, SOME DAMAGE DID OCCUR. AT GLEN CANYON DAM, TO PROVIDE GREATER CONTROL OVER THE AMOUNT OF WATER RELEASED, 8-FOOT HIGH, STEEL FLASHBOARDS WERE DESIGNED, CONSTRUCTED, AND INSTALLED AT THE DAM'S SPILLWAYS OVER THE JULY 4TH HOLIDAY PERIOD. IT WAS AN OUTSTANDING DEMONSTRATION OF HOW THE FEDERAL GOVERNMENT AND PRIVATE CONTRACTORS, WORKING TOGETHER, CAN GET THINGS DONE RIGHT AND IN A HURRY.

THE SPILLWAYS WERE SURJECTED TO A VOLUME OF WATER NEVER EXPERIENCED BEFORE. AT TIMES, SOME 90,000 CUBIC FEET OF WATER PER SECOND PLUMMETED DOWN THE SPILLWAY TUNNELS. AS A RESULT, THE LEFT SPILLWAY TUNNEL WAS SEVERLY DAMAGED BY CAVITATION AND THE SHEER FORCE OF THE POUNDING WATER. CAVITATION IS THE RESULT OF AIR BUBBLES FORMING AND THEN EXPLODING CAUSING A VACUUM AGAINST THE SURFACE OF THE TUNNEL. THIS PHENOMENON RIPPED OUT SECTIONS OF THE TUNNEL AND CREATED ONE HOLE WHICH MEASURED SOME 30 FEET DEEP.

REPAIR WORK HAS BEEN UNDERWAY SINCE AUGUST TO FILL THE HOLES AND REPLACE THE CONCRETE LINING. AIR SLOTS WILL ALSO BE INSTALLED IN EACH OF THE TWO SPILLWAYS, WHICH WE HOPE WILL PREVENT SUCH DAMAGE IN THE FUTURE. REVENUES FROM THE UPPER COLORADO RIVER BASIN FUND ARE BEING USED TO FUND THIS WORK.

WE ARE REQUESTING A TOTAL OF \$67.5 MILLION FOR THE LOAN PROGRAM IN FISCAL YEAR 1985. THERE ARE 14 PROJECTS INVOLVED. WORK WILL BE COMPLETED ON 5 PROJECTS, THE EASTERN MUNICIPAL WATER DISTRICT, THE FALLBROOK PUBLIC UTILITY DISTRICT, THE GLIDE IRRIGATION DISTRICT, THE SAN BENITO COUNTY WATER CONSERVATION AND FLOOD CONTROL DISTRICT, ALL IN CALIFORNIA, AND THE CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT IN NEBRASKA. WORK WILL CONTINUE ON 9 OTHER PROJECTS AND INVOLVES THE CONSTRUCTION OF PIPELINE DISTRIBUTION SYSTEMS, PUMPING PLANTS AND RELATED FACILITIES. WORK UNDER THE LOAN PROGRAM WILL ALSO CONTINUE ON THE CONSTRUCTION OF A ROLLER-COMPACTED CONCRETE DAM FOR THE GALESVILLE PROJECT, OREGON.

THE FISCAL YEAR 1985 REQUEST FOR ALL THE VARIOUS ACTIVITIES THAT MAKE UP THE GENERAL INVESTIGATIONS ACCOUNT TOTALS \$35.7 MILLION. THE MAJOR COMPONENTS ARE \$23.6 MILLION FOR PLAN FORMULATION AND ADVANCE PLANNING STUDIES, \$5.5 MILLION FOR THE ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM, AND \$6.0 MILLION FOR PROGRAM RELATED ENGINEERING AND SCIENTIFIC STUDIES.

THERE ARE A TOTAL OF 44 PLAN FORMULATION INVESTIGATIONS OF WHICH ONE, THE COLORADO RIVER WATER QUALITY IMPROVEMENT PROGRAM, HAS 15 INDIVIDUAL SEGMENTS. THERE ARE 23 INVESTIGATIONS THAT WILL BE CONTINUED FROM FISCAL YEAR 1984. THE EMPHASIS OF THE CONTINUING AS WELL AS THE NEW INVESTIGATIONS INCLUDES ENERGY PRODUCTION, MUNICIPAL AND INDUSTRIAL WATER SUPPLIES, IRRIGATION, WATER QUALITY, AND INDIAN WATER RESOURCE DEVELOPMENT. THERE ARE NINE NEW PLAN FORMULATION STUDIES.

WE ARE MONITORING AND MODIFYING THE NEW PLANNING PROCESS AND ARE HOPEFUL WE CAN WORK OUT AN ACCEPTABLE PROCEDURE THAT WILL REDUCE THE STUDY TIME, ELIMINATE SOME BURDENSOME AND TIME CONSUMING STEPS, AND REDUCE PROJECT COSTS.

NEW ADMINISTRATION GUIDELINES REQUIRE THAT THE BUREAU PURSUE A GOAL OF 50 PERCENT COST SHARING ON ALL NEW PLAN FORMULATION INVESTIGATIONS.

THE ADVANCE PLANNING PROGRAM, THE SECOND STAGE OF THE NEW PLANNING PROCESS, WILL EXPEDITE IMPLEMENTATION OF WORTHY PROJECTS BY ENABLING THE CONTINUATION OF PREAUTHORIZATION STUDIES WITH THE OBJECTIVE OF COMPLETING WORK IN A DEFINITE PROJECT PLAN. SIX NEW PROJECTS ARE SCHEDULED TO BE INITIATED IN FISCAL YEAR 1985.

ADVANCE PLANNING FOR CONSTRUCTION WAS PREVIOUSLY FUNDED UNDER THE CONSTRUCTION PROGRAM WHERE APPROPRIATE PLANNING COSTS WERE REIMBURSABLE. AS PART OF THE RECENTLY ESTABLISHED TWO STAGE PLANNING PROCESS WHICH SHOULD SHORTEN THE PLANNING LEAD TIME BY ABOUT 10 YEARS, ADVANCE PLANNING WAS MOVED TO THE GENERAL INVESTIGATIONS PROGRAM FOR FUNDING; HOWEVER, THE UNINTENTIONAL EFFECT OF THIS CHANGE RESULTED IN ADVANCE PLANNING COSTS BECOMING NON-REIMBURSABLE EXPENDITURES. TO CORRECT THIS SITUATION, THE ADMINISTRATION HAS MADE TWO PROPOSALS. LEGISLATION WILL BE PROPOSED TO THE CONGRESS WHICH WILL AMEND PUBLIC LAW 92-149 TO PROVIDE THAT ADVANCE PLANNING COSTS, WHICH HAVE HISTORICALLY BEEN REIMBURSABLE WHEN FUNDED UNDER THE CONSTRUCTION PROGRAM, WOULD BE REIMBURSABLE WHEN FUNDED UNDER THE GENERAL INVESTIGATIONS PROGRAM. AS AN INTERIM MEASURE, UNTIL THIS LEGISLATION CAN BE ENACTED, WE HAVE ALSO PROPOSED APPROPRIATION LANGUAGE FOR THE GENERAL INVESTIGATIONS PROGRAM WHICH WOULD HAVE THE SAME EFFECT.

THE ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM WILL CONTINUE TO DEMONSTRATE, THROUGH PILOT PROJECT RESEARCH, THE FEASIBILITY OF PRECIPITATION MANAGEMENT THROUGH CLOUD SEEDING.

THE PROGRAM RELATED ENGINEERING AND SCIENTIFIC STUDIES PROGRAM WILL CONTINUE TO DIRECT ITS EFFORTS TOWARD SOLVING PROBLEMS INVOLVED IN DEVELOPING WATER-RELATED RESOURCES. AN EXAMPLE OF OUR RESEARCH PROGRAMS' ABILITY TO RESPOND IS DEMONSTRATED BY THE MODIFICATION OF UTE DAM NEAR LOGAN, NEW MEXICO, WHICH WILL BE COMPLETED IN FISCAL YEAR 1984. IN THIS CASE WE PREPARED DESIGNS AND

SPECIFICATIONS FOR THE CONSTRUCTION OF AN UNCONTROLLED LABYRINTH SPILLWAY WHICH WILL PASS THE MAXIMUM PROBABLE FLOOD.

MANY WATER-RELATED PROBLEMS ARE BEING RESOLVED. HOWEVER, ONE OF OUR MOST CRITICAL PROBLEMS IS THE WATER SITUATION IN WHICH POOR QUALITY AND INSUFFICIENT SUPPLIES RESET MANY AREAS OF THE COUNTRY.

PROGRESS HAS BEEN MADE OVER THE PAST YEAR BUT MORE NEEDS TO BE DONE TO PROVIDE A DEPENDABLE SUPPLY OF GOOD QUALITY WATER, SUFFICIENT FOR TODAY AND GENERATIONS TO COME. WITH THE APPROVAL OF THE PROPOSED BUDGET, THE BUREAU OF RECLAMATION WILL CONTINUE TO HELP PROVIDE THE LEADERSHIP AND IMPETUS TO ACHIEVE THIS GOAL.

THIS CONCLUDES OUR PRESENTATION. I INVITE ANY QUESTIONS YOU MAY HAVE.

PAYOFF OF RECLAMATION PROJECTS

Senator ABDNOR. Senator Stennis.

Senator STENNIS. I won't take up the committee's time. I am glad to be present to hear your testimony. You have some very important projects in the Bureau of Reclamation. We don't have any in Mississippi, but I am for these activities because I am convinced in the payoff.

Mr. BROADBENT. Mr. Chairman, if I could, I know that the people in the West or the beneficiaries of Reclamation feel very much the same way as they look to projects in the South.

Senator BURDICK. I am pleased to have some answers to questions asked of the Secretary. When may I have those answers?

Mr. BROADBENT. I will be able to answer them right now and will be glad to submit them further for the record.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Senator BURDICK. The first one, what about the scheduled work for the fiscal year 1985?

Mr. BROADBENT. If I could, let me go back and say that the construction of the first phase of the Garrison diversion unit is 26-percent complete. The Snake Creek pumping plant, McClusky Canal, and the Wintering Dam are essentially complete. A new wildlife mitigation plan has been developed and is being implemented. We have contract awards for the Oakes distribution system scheduled for April 1984, and for reach 1A of New Rockford Canal which is scheduled in September 1984. Construction is underway on the Oakes pumping plant, Oakes drains, reach 1B of New Rockford Canal, and Lonetree Dam. Minor contract work, purchase of fish and wildlife mitigation lands, designs, land acquisition, and other preconstruction activities also are underway.

In the 1985 program, construction will continue on reaches 1A and 1B of the New Rockford Canal, Lonetree Dam, and Oakes distribution system. Design and other preconstruction activities will continue on other features of the project. Contracts are scheduled to be awarded for Taayer Dam, Oakes Canal, lining for reach 1B of New Rockford Canal, and reach 2 of New Rockford Canal, which includes James River feeder canal.

FISH AND WILDLIFE MITIGATION PLAN

Under the fish and wildlife mitigation plan, which was an issue raised also, we have a new mitigation plan covering the first 85,400 acres. We have acquired from willing sellers in fiscal 1983 3,475 acres of new lands and again in 1984, 3,465 acres of new land for mitigation. We are on schedule on the fish and wildlife mitigation. As of now, this mitigation plan stresses intensive management of existing and already acquired lands to increase their productivity and improve habitat value together with acquisition and development of additional land.

I think that pretty much covers it.

JOINT TECHNICAL COMMITTEE

Senator BURDICK. What about the work of the Joint Technical Committee, and the Biota and Fishery Task Force? Are you familiar with that?

Mr. BROADBENT. The Joint Technical Committee met on January 10 and established three subteams: Engineering, biota, and fisheries and wildlife. These teams have held meetings and are preparing reports to present to the Joint Technical Committee. On April 1, 1984, a fourth subteam, the West Oakes test area, will be having their first meeting. We have tentatively scheduled another meeting with the Canadians in April, I think around April 25. Sometime before that the subteams will have reported to us on the engineering, biota, and fish and wildlife action items that were assigned.

Senator BURDICK. That is in the future, it doesn't affect the project?

Mr. BROADBENT. No, sir. Those technical teams are working very closely together and there are representatives from both North Dakota and Manitoba, as well as the United States.

Senator BURDICK. There is better feeling developing between the United States and Canada?

Mr. BROADBENT. I hope so. I hope there is more trust, because we are sure open to them.

Senator BURDICK. I want to go over this again. The committee people don't realize how much our Garrison Dam provides revenues for these things.

Mr. BROADBENT. It is a good project and we would like to see it move ahead as rapidly as possible.

Senator ABDNOR. Commissioner, I have a few parochial questions on projects I must ask you as long as I am here.

BELLE FOURCHE IRRIGATION DISTRICT

The State of South Dakota is interested in advancing loan funds to the Belle Fourche Irrigation District to accelerate the work on the rehabilitation project that was authorized by Public Law 98-157. Would you be willing to work with the State to investigate the possibility for expediting this work?

Mr. BROADBENT. I think I am going to ask Bob Olson to answer that. He is my South Dakota connection, Mr. Chairman.

Mr. OLSON. Mr. Chairman, we are aware that the South Dakota State Senate has passed and approved a potential loan of \$700,000 for the Belle Fourche Irrigation District and the South Dakota House of Representatives should be acting on that in a few days. Our regional office says they have the capability of doing about \$710,000 worth of work in fiscal year 1985 if we could find the funds to do it. We understand that if non-Federal contributions of approximately \$700,000 are advanced by the State of South Dakota and used during fiscal year 1984, this will create an additional capability of \$1 million during fiscal year 1985. These funds could be utilized for completing preconstruction activities such as the collection of design data and land acquisition.

Such preconstruction activities would be substantially completed for the following project features: Belle Fourche diversion dam, inlet canal, north canal, south canal, Indian Creek lateral, townsite lateral, and Deer Creek lateral. In addition, capability would exist to award new contracts for the repair and replacement of both the Belle Fourche diversion dam and the inlet canal.

Senator ABDNOR. We will be happy to help you look.

Senator BURDICK. Is that the project where we have an extension to the North Dakota border?

Mr. OLSON. This is not the project.

WEB PROJECT, SOUTH DAKOTA

Senator ABDNOR. The \$5 million requested in the President's budget for the WEB project is the first construction funding included in any administration budget for any project sought by local citizens in my State in a decade, and as such, it is encouraging. The bids have come in under the estimate and we are very, very pleased about that. But there is a concern that the cost to complete the project will be higher than necessary if funding cannot be increased.

Considering how poorly South Dakota has fared relative to other States with regard to construction funding, would you be willing to reconsider speeding the completion of WEB?

Mr. BROADBENT. I think we will be pleased to work with the committee on the WEB project. We understand your concerns and we will be pleased to work with the committee on it.

Senator ABDNOR. What will be the impact on the completion schedule if only \$5 million is approved? Can you give us a guess on that?

Mr. BROADBENT. I would have to submit that for the record. It depends on the subsequent years and how much money is put in.

[The information follows:]

WEB WATER DEVELOPMENT PROJECT

If \$5 million is appropriated for the WEB water development project in fiscal year 1985 as requested by the Bureau, water delivery to the phase I area (Selby) of the project would remain on schedule. However, subsequent construction would be curtailed and there would be a minimum delay of 1 year in the project's completion date proposed by the WEB Water Development Association.

SAVINGS DUE TO LOW BIDS

Senator ABDNOR. One thing, I suppose this could be said for most projects, but there would be quite a savings because of some great bids and contract awards.

Mr. BROADBENT. We understand the full capability is considerably over \$5 million.

Senator ABDNOR. Yes, that is why we are bringing up the subject.

CENDAK AND LAKE ANDES-WAGNER PROJECTS

We are pleased with the President's request for advanced planning funding for CENDAK and Lake Andes-Wagner irrigation projects. Hopefully, the report on these projects will be completed. I was wondering, can we count on the Department's support in attempting to move these projects as contemplated under the Pick-Sloan Missouri basin program, assuming these project reports are favorable?

Mr. BROADBENT. I would think Lake Andes-Wagner looks fairly good. CENDAK is one that is going to take a lot of discussion between South Dakota, the Bureau of Reclamation, and some Members of Congress. We are not far enough along on that study to be 100 percent definite, Mr. Chairman. The Department's request for advance planning funding for both CENDAK and Lake Andes-Wagner indicated its support for development of environmentally and economically feasible water resources projects in South Dakota under the Pick-Sloan Missouri basin program.

Senator ABDNOR. We are confident it is going to look good. I had a full-day hearing and 70 witnesses out in South Dakota last week.

Mr. BROADBENT. I got a full report, as did Mr. Olson. We thought it went well.

Senator ABDNOR. I sound self-serving here today asking all these questions. When I see projects and how many years they have been talking about projects in my State and how few ever get put together, somehow I can't quite push enough. If I get to be a problem it is because I think the time has come when we have to start some of these. Mr. Olson knows this better than most.

WEB PROJECT, SOUTH DAKOTA

Senator BURDICK. I missed the name of the project. Is it WEB?

Mr. BROADBENT. Yes, the name is an acronym for Walworth, Edmunds, and Brown Counties.

Senator BURDICK. All we want to do is increase those waterlines about 2 or 3 inches in diameter. I understand it is going to cost a lot of money. That is going to make a good project because it will bring the water out in North Dakota. I hope you can get a pencil to increase the dam just a little bit.

Mr. BROADBENT. As I understand it, that project is actually being designed by consulting engineers and the Government is providing the funding for it. But the direction, I think, has to go to the consulting engineers who are doing the project for WEB, but I will be happy to pass that message along to them.

Senator BURDICK. Today you don't tell the consulting engineers what to do.

Mr. BROADBENT. That is why I said I would be happy to pass it along.

ANIMAS-LA PLATA AND NARROWS PROJECTS, COLORADO

Senator ABDNOR. Commissioner, over the past several years the administration has asked for funding and strongly supported the Animas-La Plata project and the Narrows project in Colorado, yet I note that no funds are requested for either of these projects in the 1985 budget request. Has there been a change in the administration's position on these two projects? And if so, what is the reason for the change in the position and are both projects still justified on economic and other grounds?

Mr. BROADBENT. Mr. Chairman, I don't think there has been a change in the administration's policy on Animas-La Plata or Narrows. I think they still both carry—in fact, I am sure they both carry a positive cost-benefit ratio based on the time they were authorized. I think our real problem is that one project costs \$400-plus million and the other has a cost of \$500-plus million. With our budget constraints, the fact that we already have a \$100 million increase in our budget over last year, in looking at our outyear numbers, we were reluctant at this time in our economic circumstances to push forward those projects. We have been actively working with the State of Colorado on cost sharing on Animas-La Plata. We have also had discussions with the State of Colorado on cost sharing on the Narrows project. We have also had some discussions with New Mexico and counties in New Mexico on Animas-La Plata. Hopefully, we recognize there is presently before this committee an appropriations bill that has Animas-La Plata and one before the House that has Narrows. We would be pleased to work closely with this committee and with the House committee and move forward with action on those bills.

Senator ABDNOR. Thank you.

I wonder, though, if you can give us the cost-benefit ratio for both of the projects. Maybe you would like to give it to us in writing.

Mr. Olson. We can submit that for the record.

Mr. BROADBENT. We will submit it for the record.

[The information follows:]

BENEFIT-COST RATIO ON POTENTIAL NEW STARTS

Project	Total benefit-cost ratio	Authorized interest rate
Animas-La Plata, Colorado.....	1.8	3.25
Narrows unit, P-S MBP, Colorado.....	1.3	3.25

WEATHER MODIFICATION PROGRAM

Senator BURDICK. Referring to the weather modification program taking place at the University of North Dakota, I understand that your budget has increased \$750,000. If that is so, is that adequate to continue the work at the university?

Mr. BROADBENT. I think I will have to submit that for the record. I think there may be some problems, but I would like to submit it for the record.

[The information follows:]

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM

The proposed budget does not include comparable funding for research and development work at the University of North Dakota as that supported by the Bureau's current appropriation. The \$650,000 grant which the Bureau made to the university for that purpose in fiscal year 1984 came as a result of additional funds appropriated by the Congress. The additional \$756,000 requested for fiscal year 1985 will be chiefly used in the Sierra cooperative pilot project (\$375,000) and the Colorado River augmentation demonstration program (\$325,000). The University of North Dakota does provide facilities and research support to both these programs, but it would not be the only recipient of the added funding.

CONTRACT WITH MOROCCO ON ATMOSPHERIC RESEARCH

Speaking of the Morocco project, we do have a proposed contract for Morocco atmospheric research. It has not cleared the appropriate hurdles in the administration, but it is a sizable contract that will be funded by the Agency for International Development.

WATER RESOURCES RESEARCH VETO OVERRIDE

Senator ABDNOR. One last question for Mr. Broadbent. As the Assistant Secretary-designate for Water and Science, I know you have an interest in S. 684, the Water Research Act that was passed by both Houses of Congress and is now on the President's desk for signature. I think the Department has indicated at least it would not object to enactment, but I understand OMB seems to be objecting to it. I was hoping you would give us a little help with that and push for its enactment. We think it is important in reforming our research programs. It is a lot different than it was. Participation with matching funds is required, and each year the matching requirements increase. We think that research is as important in water as it is in industry and anything else.

Mr. BROADBENT. Senator, I have discussed this with Secretary Clark. I am not aware if he discussed it with OMB or the White House. You are right about the Department's position that we do not object to enactment of the bill.

Senator ABDNOR. I forgot to mention this matter to him, but I hope when you see him today you will tell him that.

Mr. BROADBENT. And I will see him today. I will bring it up. If you want, you may even call him.

Senator ABDNOR. Thank you. I think it will be a good idea.

ADDITIONAL QUESTIONS SUBMITTED FOR THE RECORD

Senator ABDNOR. Senator Stennis.

Senator STENNIS. I have nothing further. I have enjoyed the hearing.

Senator ABDNOR. There will be some questions submitted by Senator DeConcini who wanted to be here, Senator McClure, and Senator Hatfield our chairman couldn't be here this morning—he had to be at the White House. But there are some questions he will submit for the subcommittee.

Mr. BROADBENT. We will be happy to respond quickly to those questions. We are prepared to respond on a rapid turnaround, Mr. Chairman.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR HATFIELD

Foreign Programs and Activities

Question: The Committee has been informed that the foreign programs and activities of the Bureau of Reclamation are being increased. Briefly, where and in what activities is the Bureau involved? How does the Bureau become involved? Does the Reclamation Act provide sufficient authority for your involvement in this type activity?

Answer: The Bureau of Reclamation provides technical advisory assistance and training programs to other nations on a reimbursable basis. The Bureau becomes involved when assistance is requested by a foreign government, a United States agency such as AID, or an international organization such as the World Bank. Authority for the Bureau's involvement in these activities comes from the following legislation:

Foreign Assistance Act of 1961 (Public Law 87-195);

Section 635 (d)(91) - employment/assignment outside the U.S. by agency with AID funding.

Section 607 - authorized U.S. agencies to furnish services and commodities on advance of funds or reimbursement to foreign countries with Trade and Development Program's (TDP) Director's approval; and

Section 661 - allows TDP to pay for U.S. costs associated with negotiations under section 607 and/or stimulate sale of U.S. goods or services.

U.S. Information and Education Exchange Act of 1948 (Public Law 80-402)

Mutual Education and Cultural Exchange Act of 1961 (Public Law 87-256)

Question: Is work done on a reimbursable basis, or are other Bureau-appropriated funds used to finance this work?

Answer: All activities are reimbursable. In FY 1983 the reimbursable budget was \$5.8 million.

Question: How many people are involved in this work? Can you provide a detailed description of what activities are planned in 1984/85?

Answer: A total of 34 man-years are devoted to the Bureau's international activities. Of these positions, 20 are personnel stationed overseas on a fulltime basis and 16 of these slots are exempted from the Bureau's personnel ceiling. Of the staff members, 5 are in the Washington office and 9 are in the Denver office.

In FY 1983 the Bureau provided long term advisory assistance to Saudi Arabia, Zaire, Malaysia, Egypt and Israel. During the same time the Bureau provided 45 technical experts to countries such as Pakistan, Peru, Sri Lanka, Colombia, and Korea on behalf of international organizations such as AID, the World Bank, the United Nations, the Food and Agriculture Organization, and the Inter-American Development Bank. The Bureau provided technology transfer through training programs for 121 trainees and 265 visitors from 41 different countries. The Bureau was also involved in the transfer of technology through implementation of Science and Technology Agreements with Spain and the People's Republic of China. During 1983 we also initiated discussions with the Governments of Pakistan, Israel, Sudan and Brazil; and with AID for activities in Pakistan, Morocco and Somalia.

In 1984 and 1985 we expect the long and short term technical assistance programs to continue. We also expect a number of other agreements to be ratified and work to be initiated in the Sudan, Somalia, Brazil, Pakistan and possibly the People's Republic of China. We will also continue providing training programs to further the transfer of technology to other countries.

Question: What is the justification for assigning 3 additional people to these activities?

Answer: We will be assigning additional personnel to implement a number of international agreements which have already been ratified and some which we expect to complete within the next year. When assigning personnel to a permanent, or in some cases temporary assignment overseas, we will request slots exempt from the Bureau of Reclamation's allocation for ceiling.

For many years the Bureau's international program remained static or grew smaller as projects were completed. However, in the past several years there has been an increased interest in the Bureau's technical assistance capabilities. As a result, it has been necessary to increase the Washington staff to respond to this interest, to meet with representatives of foreign governments, to negotiate details of agreements, scopes of work, cost estimates, etc. We believe that by providing these international services, the Bureau can help create opportunities for sale of U.S. goods and services which otherwise might not be present, while at the same time supporting U.S. foreign policy.

Colorado River Flooding

Question: Could you update the Committee on the current flooding situation along the Colorado River? What is the flooding potential this Spring given the large snow levels?

Answer: Based on current runoff forecasts and reservoir levels, we anticipate no serious flooding along the lower Colorado River this year. The January 1, 1984, forecast for April-July runoff into Lake Powell was for 13.0 million acre-feet (maf), which is 174% of the 7.46 maf average spring runoff. By mid-February the forecast had declined to 11.9 maf, 160% of normal, as January and February precipitation has been generally below normal in the Colorado River Basin. Since these early forecasts have been considerably above normal, we have been making large releases from the reservoirs, and thus there will be adequate reservoir storage space to handle the anticipated runoff without having to make damaging releases.

Question: What actions have been taken or are planned to keep flood damages to a minimum?

Answer: Since early January, when the first runoff forecast indicated an above normal spring runoff, we have been making large releases from the Colorado River reservoirs to increase available flood control storage space. Releases have averaged 25,000 cubic feet per second (cfs) from Glen Canyon Dam, 31,000 cfs from Hoover and Davis Dams, and nearly 30,000 cfs from Parker Dam. While those are high releases, no serious flooding occurs at those flow levels. As a result of those releases, we will have over 8 maf of flood control space available in the reservoir system by March 1, and over 9 maf by April 1. That amount of space will enable us to handle the predicted runoff without any further increases in reservoir releases. If the runoff forecast holds at the present 160% level or decreases in coming months, then we will begin to reduce the current releases in March. If the forecast should increase, we would plan to hold current release levels for another month or longer. Only if the forecast increased substantially from present levels would there be any likelihood of an increase in current flow levels and subsequent flooding problems.

Question: Has the Bureau been able to assess all of the damage resulting from last year's flooding?

Answer: No, the high releases along the lower Colorado River since last summer have prevented us from accurately assessing all the damage. We had planned to reduce reservoir releases for a week in late January to permit damage assessment and repair work, but the high runoff forecasts have necessitated large releases and the planned reduction had to be postponed. A preliminary survey of damages from Davis Dam south to the Mexican border has identified over 50 items requiring repair, including canals, drainage systems, riverbank protection and control structures, bridges, and gaging stations. Costs are estimated at \$ 40 million, and it will take three years to complete all the repairs.

Jobs Bill

Question: We are approaching the one year mark since enactment of the Emergency Jobs Bill last year which appropriated \$116 million for the Bureau of Reclamation. What is the current status of obligations and expenditures of those funds by account?

Answer: The information will be provided for the record. (The information follows:)

Status of Funds -- Jobs Bill

<u>Account</u>	<u>Jobs Bill Funding</u>	<u>Obligations</u>	<u>Expenditures</u>
Construction	\$65,000,000	\$56,616,000	\$45,026,000
Loan	30,000,000	28,580,000	10,610,000
O&M	21,000,000	20,041,000	15,761,000

Question: Your first quarter report for fiscal 1984 shows significant expenditures yet to be realized from the \$30 million provided for loan program work, particularly for projects in California. How do you explain this delay -- the Committee thought that this type of work was ready to go?

Answer: The loans to which you referred were ready to go because the loan applications had been approved by the Secretary of Interior. We were at the point of waiting for a Congressional appropriation. Following the availability of appropriated funds for the loan program, the Bureau must enter into contract negotiations with the borrowing entity. After this step, the contract must be executed and validated. The entire repayment contract process is time consuming and generally runs from 6 - 12 months. As you can realize, loan funds cannot be obligated and expended until repayment contracts have been executed and validated.

Question: What action is being taken to insure the expedited use of these funds in accordance with Congressional intent?

Answer: In those situations where the prospect of fully utilizing available funds appears low, the Bureau will reprogram the funds to loans which are active. We are presently in the process of doing that on five loans and expect high expenditures on all loans funded under the Jobs Bill before the end of FY 1984.

Appropriation Ceilings

Question: How many projects requested in the 1985 budget have a total estimated cost greater than the current appropriation ceiling?

Answer: There are ten projects and the Safety of Dams Program which require additional authorizing legislation to increase the appropriation ceiling before the projects can be completed. The ten projects are the San Luis Unit and Auburn-Folsom South Unit of the Central Valley Project; the Oroville-Tonasket Unit of the Chief Joseph Dam Project; Title I and Title II of the Colorado River Basin Salinity Control Project; Garrison Diversion Unit, O'Neill Unit, and North Loup Division of the Pick-Sloan Missouri Basin Program; the Colorado River Storage Project, and the Washoe Project.

Question: Are any of the projects for which funds are requested in 1985 sufficiently close that legislation to raise the appropriation ceiling will be needed before you can use the funds requested?

Answer: There is sufficient appropriation ceiling on all projects that have a FY 1985 fund request.

Rogue River Basin, Grants Pass, Oregon

Question: I note that the Bureau is terminating work on the Rogue River Basin, Grants Pass study in 1984, yet in response to a question last year you indicated that there was support for solving the anadromous fish passage problem at Savage Rapids Dam.

What is the likelihood that non-Federal hydropower development will take place?

Answer: Legislation to permit non-Federal hydropower development at other sites on the Rogue River has been introduced and defeated by the Oregon State legislature in the last two sessions. Based on past legislative action it appears the hydropower issue will not be reconsidered; however, there is still non-Federal interest in developing hydropower on the Rogue River.

Question: Assuming hydropower development either can't or won't take place, then why are we not proceeding to solving the existing passage problems?

Answer: Because of pending FERC applications and expense in doing project planning analyses under scenarios with and without power development it was decided to terminate funding until a resolution to the hydropower issue was reached. If hydropower development is approved at Savage Rapids Dam it may be the responsibility of the applicant to provide a solution to the fish passage problem.

We will continue to pursue the desirability of proceeding with the study with State and fishery agencies and the State Department of Water Resources to determine their support to reinstate this study in fiscal year 1986.

Siletz River Basin Study

Question: Only \$50,000 is being used to initiate the Siletz River Basin study in 1984.

Has the completion schedule changed from that anticipated by congressional action appropriating \$200,000 to undertake this study?

Answer: Congressional action was taken appropriating \$200,000 to initiate this study in fiscal year 1984; at the same time funding to complete the Upper John Day Project study was inadvertently terminated. We felt it imperative to complete the Upper John Day study in fiscal year 1984 and through a change order reprogrammed \$150,000 for this study from funds appropriated for the Siletz River Basin study. This action required scheduling the initiation of the Siletz River Basin study in the fourth quarter of fiscal year 1984 and moving three quarters of work into fiscal year 1987. The length of time needed to accomplish study tasks has not been extended nor has the study cost changed.

Question: If the schedule had been slipped, does the Bureau have the capability to recapture the lost time and what would be required to do this?

Answer: Acceleration would adversely affect the credibility of the study. The key feature of the potential Siletz Basin Project is a storage dam and reservoir at the Big Rock site on Big Rock Creek, which is a tributary of the Siletz River. Geologic and seismic exploration is needed during the detailed planning phase to confirm adequacy of the Big Rock site and to provide information needed for feasibility level dam design and cost estimate preparation. Because of weather and related access constraints, the geologic and seismic studies, which will require core drilling the damsite and reservoir area, should not be initiated until June. Under our present schedule, these activities, which represent a major study cost, are scheduled for July 1985. Once this work is completed, designs and cost estimates can be completed and the planning report prepared.

Question: Would it be possible to complete the study in 1986? If so, what resources are needed?

Answer: It would be inappropriate to proceed with the geologic and seismic exploration work and detailed dam design until specific water needs and local financial capability are confirmed. During the latter part of fiscal year 1984, discussions will be held with local community leaders to confirm the amount of water needed for municipal and industrial purposes and other uses. Also, local capability to repay prospective water service costs and to participate in up-front funding of a portion of the project construction cost will be determined. Assuming positive conclusions on these items, reservoir sizing could be finalized in preparation for damsite geologic and design work.

It would appear that the only significant study items that could be addressed by additional funding now would be geologic and seismic work and dam design, and this would be inappropriate until prerequisite work on water needs and local financial capabilities is completed.

Farmers Irrigation District

Question: The justification material for the Farmers Irrigation District study in Oregon indicates that the completion schedule has been slipped 1 year due to the lack of sufficient funds.

How do you explain this in light of Congress appropriating the full request of \$215,000 for 1984 and the fact that the justification material for 1985 shows \$215,000 being applied?

Answer: When the fiscal year 1984 Budget Justifications documents were prepared, we were hopeful of getting a fiscal year 1983 appropriation. The fiscal year 1983 Budget Justification documents included \$150,000 in fiscal year 1983 under the line item "Investigations of Existing Projects" for this study. The fiscal year 1983 continuing resolution and language contained in S. 3079 (Report No. 97-673) limited fiscal year 1983 funding to \$50,000 for this study. In view of the constraints imposed by the continuing resolution it was necessary to reschedule the fiscal year 1983 activities planned for this study and slip the completion date 1 year.

Question: Can the 1984 completion schedule be regained? If so, what will be required?

Answer: No, the necessary activities cannot be accelerated to meet a 1984 completion date. However, a summary report is being completed and will be made available shortly to the district as a decision document to determine our future course of action.

Economic Benefits of the Federal Bureau of Reclamation Program

Question: What are the benefits of Western irrigation supported agriculture from the point of view of the national economy and United States foreign trade policy?

Answer: Western irrigation facilities constructed by the Bureau of Reclamation continue to perform a major role in the national economy and in the foreign trade policy of the United States. Since passage of the Reclamation Act of 1902, a total cumulative value of over \$92 billion in crops has been raised from Reclamation projects costing about \$7.3 billion to construct. Although the difference does not represent net return, it does signify, to some extent, the importance of these crops to local and national economies.

A total of \$7.3 billion in crops was harvested from 10.6 million acres of land serviced by Reclamation projects in 1982. This represented about 9.5 percent of the total value of crops produced in the United States last year.

Project lands are especially important for the production of vegetables, fruits, and nuts. During 1982, \$2.2 billion in fruits and nuts and \$1.6 billion in vegetables were produced from Reclamation projects. This represented nearly 38 percent and 45 percent, respectively, of the total 1982 commercial production of these commodities in the United States.

Many of these crops are exported to other countries, providing revenue from external sources which helps to reduce the deficit in the balance of payments. Many commodities are used in various foreign aid and welfare assistance programs to feed impoverished people throughout the world.

Flood Control Benefits

Question: What are the flood control benefits from Reclamation projects and facilities?

Answer: Flood control benefits resulting from the operation of Reclamation's project facilities in 1982 totaled an estimated \$106.6 million. That is almost 57 percent above the annual average of \$68 million for the 33-year period, 1950-1982.

During the period 1950-1982, the value of cumulative flood control benefits from Reclamation projects totaled \$2.2 billion. This is more than 2-1/2 times the \$895.5 million cumulative expenditure allocated to flood control since the first allocation of funds for flood protection in 1926.

Budget Impact of High Flows and Earthquake Damage

Question: We understand that you have had damage to facilities along the Colorado River and other streams due to high water flows, plus some earthquake damage in fiscal year 1983. Has this had any impact on your fiscal year 1985 budget?

Answer: Yes it has. High water damage along the Colorado River has been a major problem in FY 1983 and FY 1984, causing a diversion of both operation and maintenance and construction funds from other uses to take care of this high priority work. With the flexibility that we have in these two appropriations we simply delayed lower priority items scheduled in FY 1984 until FY 1985. High flow damage on Mann Creek in the Pacific Northwest Region and the Rio Grande River in the Southwest Region has caused us concerns this year also. In California we experienced some earthquake damage at our Pleasant Valley Pumping Plant and we plan on building a bulkhead to protect the plant's surge tank. We anticipate making most repairs to these various facilities with funds currently available or within our fiscal year 1985 budgetary request.

Damage to Glen Canyon Dam's spillways due to cavitation will come from applied revenues, which require no further congressional action for their use.

HIGH FLOW POTENTIAL, WESTERN UNITED STATES

Question: What is the outlook for a recurrence of last year's high flow problems in many parts of the West?

Answer: The above normal runoff and streamflows that occurred in many of the river basins in the Western United States in 1983 have resulted in higher than normal soil moisture, streamflow, and reservoir storage conditions. To date, winter snowpacks are above normal in the Colorado River Basin, parts of the Columbia and the Snake River Basins, the Platte River Basin, and the Great Basin. In other western drainage basins, snowpack is generally near normal.

The main areas that experienced high flows in 1983 were the Colorado River, the small rivers in Utah draining from the Wasatch Front into Great Lake, portions of the Snake River Basin, the North Platte River,

and most of the rivers in California. With the exception of California these are the areas with the greatest potential for high flows in 1984. Reclamation projects are being operated as much as possible to reduce the threat, but in some of the areas we have little or no capability to control high flows since the bulk of runoff is from unregulated streams or from basins where there is only a small amount of flood control storage space available to regulate the runoff.

TUALATIN PROJECT, OREGON

Question: Last year we directed the Bureau to use \$390,000 of available funds for the proposed by-pass solution to correct the siltation problem at Spring Hill Pumping Plant. What is the status of that work?

Answer: Designs and specifications are being prepared to correct the siltation problem. A contract will be awarded this summer, anticipating a resolution of the cost sharing problems. The estimated cost of the modifications to alleviate the siltation problem is approximately \$500,000. Under currently proposed cost sharing arrangements, non-Federal funds of approximately \$110,000 are needed. The City of Hillsboro, Oregon, is reluctant to furnish the entire \$110,000 and is negotiating with the Tualatin Valley Irrigation District for partial cost sharing. These entities have not reached agreement and until the non-Federal funds are available, we cannot proceed with the modifications. The Spring Hill Pumping Plant structure is a joint facility, shared by the City of Hillsboro, Oregon, and the Bureau's Tualatin Project. Originally, the structure was jointly financed by both the Bureau and the City on a 60/40 basis, respectively.

NATIONAL WATER RESEARCH

Question: What has been accomplished with the Fiscal Year 1983 funding provided to the Bureau of Reclamation for the National Water Research program?

Answer: In fiscal year 1983, \$7,678,000 was available, which included \$6,000,000 from the fiscal year 1983 Interior and Related Agencies Appropriations Act, P.L. 97-394, and \$1,678,000 in carryover funds from prior years. These funds were available to administer and close-out water-related research projects transferred to the Bureau of Reclamation and continue on-going, high-priority, water-related research. Approximately \$3,900,000 of this total is being used for related research and development work.

During fiscal year 1983 a total of 321 research proposals were received in response to the Bureau of Reclamation's March 18, 1983 announcement for research proposals in five major categories (Water Reuse, Water Conservation and Use Efficiency, Brackish Water Utilization, Groundwater Management, and Saline Water Conversion) and 52 proposals were received under the Small Business Innovation Research Program. As of February 14, 1984, 12 research contracts and grants have been executed for a total amount of \$1,210,721. Eleven additional proposals, totaling about \$1,383,000 have been selected and approved for grant/contract action. These 23 actions are in the following major research categories:

(a) Water Reuse - 8 proposals	\$ 989,186
(b) Water Conservation and Use Efficiency- 1 proposal	\$ 121,560
(c) Groundwater Management - 7 proposals	\$ 698,265
(d) Saline Water Conversion - 6 proposals	\$ 750,555
(e) Small Business Innovation Research Program - 1 proposal	\$ 33,703
Total	\$2,593,269

Technical reviews are continuing to make proposal selections for obligating the balance of the fiscal year 1983 carryover funds, about \$1,307,000.

The remaining \$3,778,000 is being used for:

1. Fiscal years 1983, 1984, and 1985 program administration \$1,970,000
2. Early fiscal year 1983 test facility maintenance and operation obligations \$ 278,000
3. Disposal of saline water conversion test facilities including the Orange County, California Vertical Tube Evaporation/Multi-Stage Flash distillation module (if required) \$ 600,000

4. Guam water resources study	\$ 550,000
5. Obligation adjustments to old programs	<u>\$ 380,000</u>
Total	\$3,778,000

As of February 17, 1984, closeout documents on 316 of the 771 active and inactive research contracts, grants and cooperative agreements transferred to the Bureau had been received. Closeout from a business management standpoint has been completed on 252 of those projects.

Question: How would the Bureau of Reclamation close out the present program?

Answer: If new funds are not appropriated to continue the program, it will be phased out over the next two-to-three years with \$470,000 appropriated for administrative expenses in fiscal year 1984 and carryover funds from fiscal year 1983. A few of the more recent research projects will carry over into fiscal year 1986.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM - DEVELOPING NATIONS

Question: What is the Bureau doing to provide assistance to the developing nations of the world in implementing scientifically and socioeconomically sound precipitation augmentation operations?

Answer: The Bureau has entered into an agreement with the Agency for International Development to conduct a major cloud seeding demonstration and training program in Morocco. Existing techniques will be applied to increase snowpack in the Atlas Mountains to provide augmented water supplies. The Bureau also has provided weather modification technical assistance to Spain to help meet the water crisis in the Canary Islands.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM - CREST

Question: What is the Bureau doing with the Colorado River Enhanced Snowpack Test (CREST)?

Answer: The Bureau has prepared draft legislation which would authorize CREST with a provision for reimbursable financing through a uniform surcharge on purchases of hydroelectric power generated at

Federally owned dams in the Colorado River Basin. In addition, a comprehensive program plan, an environmental assessment, and a Finding Of No Significant Impact have been prepared.

The Department of the Interior forwarded the proposed legislation to the Office of Management and Budget on June 20, 1983. The legislation is being reviewed with particular consideration being given to the method of funding and the Basin States' support of this initiative. We are currently working with the OMB to resolve any concerns it might have.

Question: What support does CREST have within the Colorado River Basin?

Answer: There is solid support for the concept of CREST. Snowpack enhancement through cloud seeding has emerged as the most promising technology to meet foreseeable water demands that are projected to exceed natural flow by several million acre-feet annually. Augmentation would also be a highly economical method of reducing salinity levels. Three independent assessments have projected that operational snowpack enhancement could increase the flow of the Colorado River by 1 to 2 million acre-feet annually. This would provide \$9 to \$12 in benefits for every dollar spent on operations. Flows augmentation for the Colorado River is authorized by exiting legislation.

The Basin States have expressed some concern over the cost recovery provision of the proposed legislation, and we are continuing to explore alternative financing with public power interests and water users. The State of California has drafted legislation that would authorize CREST but reduce the reimbursable cost of the project. This legislation is currently being reviewed and coordinated by the Basin States.

ATMOSPHERIC WATER RESOURCES MANAGEMENT PROGRAM - HIPLEX

Question: Senate Report 98-153, relating to the fiscal year 1984 appropriations bill, provided an additional amount of \$650,000 to

be spent on HIPLEX-related research and aircraft operations. How is this write-in amount being spent?

Answer: A \$650,000 research grant has been awarded to the University of North Dakota to cooperate with the State of North Dakota's operational cloud seeding program in applying the HIPLEX results and to provide weather modification pilot training. Also, under this grant, cloud physics studies are being conducted on winter storms in the Colorado River Basin. The grant will continue the lease payments and other support for the specially equipped Citation research aircraft developed for HIPLEX.

PROJECT CAPABILITIES FOR 1985

Question: Provide for the record a list showing the Bureau's funding capability for 1985 for all studies, planning, and construction projects.

Answer: We will be pleased to provide for the record a list of projects on which additional capability exists for consideration during your evaluation of the President's budget. However, in view of the current budgetary constraints, we would not recommend that additional funds be added to the President's requested budget. While work on individual projects and/or activities could be initiated and/or accelerated, full accomplishment of all of the work on the list in fiscal year 1985 would not be possible. The President's budget request does represent the preference of work for fiscal year 1985 and an efficient workload for the Bureau. Therefore, any additions from the attached list would result in a reduction of a similar amount of work on projects included in the President's budget. The prepared list is provided for the record.

(The information follows:)

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Fiscal Year 1985 Proposed Capabilities by Appropriation and Project

Appropriation/Project	Fiscal Year 1985 Request			Additional Capabilities Submitted			Total Capability	
	Federal	Non-Federal	Total	Federal	Non-Federal	Total	Federal	Non-Federal
General Investigations								
Plan Formulation Investigations: 1/								
Project Investigations:								
Alamojordo Municipal	---	---	---	150	---	150	150	---
& Industrial Water								
Supply								
Denver Basin Ground-Water	---	---	---	33	33	66	33	33
Recharge Study								
High Plains States Ground-	---	---	---	500	---	500	500	---
Water Demonstration Prog.								
San Juan - Chama Project	---	---	---	175	---	175	175	---
South Platte River Operations								
Management Study	---	---	---	60	60	120	60	60
Special Investigations:								
High Mountain Aquifer	---	---	---	172	57	229	172	57
Development Study								
General Engineering and								
Research:								
Atmospheric Water Resources	5,471	---	5,471	3,350	---	3,350	8,821	---
Management Program								
Program Related Engineering								
and Scientific Studies	5,967	---	5,967	1,033	---	1,033	7,000	---
(PMRSS)								
Other G.I. Programs	24,213	---	24,213	---	---	---	24,213	---

1/ Due to the \$1.7 million underfinancing in the General Investigations program, additional capability for planning studies exists only if additional funds are added to the budget.

BUREAU OF RECLAMATION

Fiscal Year 1965 Proposed Capabilities by Appropriation and Project

Appropriation/Project	Fiscal Year 1965 Request			Additional Capabilities Submitted			Total Capability		
	Federal		Non-Federal	Federal		Non-Federal	Federal		Total
Construction and Rehabilitation:									
Regular Construction:									
Central Valley Project,	3,500	---	---	5,000	---	---	8,500	---	8,500
Auburn-Folsom Unit	---	---	---	---	---	---	---	---	---
Pick-Sloan Missouri Basin	---	---	---	5,550	---	---	5,550	---	5,550
Program, Harrows Unit	1,500	---	---	1,500	---	---	3,000	---	3,000
Santa Margarita Project	---	---	---	---	---	---	---	---	---
Drainage & Minor Construction	---	---	---	---	---	---	---	---	---
Colorado River Front Work	16,500	---	---	10,300	---	---	26,800	---	26,800
and Levee System	---	---	---	---	---	---	---	---	---
Safety of Dams:									
P-SMP, Rapid Valley,	1,550	---	---	1,750	---	---	3,300	---	3,300
Pactola Dam	---	---	---	---	---	---	---	---	---
Preconstruction Activities:	---	---	---	---	---	---	---	---	---
P-SMP, Belle Fourche Unit	---	---	---	710	---	---	710	---	710
Colorado River Basin	---	---	---	---	---	---	---	---	---
Salinity Control Projects:	30,463	---	---	7,000	---	---	37,463	---	37,463
Little I Division	---	---	---	---	---	---	---	---	---
Colorado River Storage	---	---	---	---	---	---	---	---	---
Project:	---	---	---	---	---	---	---	---	---
Animas-La Plata	---	---	---	1,250	---	---	1,250	---	1,250
Recreational and Fish	7,951	---	---	16,540	---	---	24,531	---	24,531
and Wildlife Activities	---	---	---	---	---	---	---	---	---
Work for Other Agencies:	5,000	400	---	12,700	---	---	17,700	400	18,100
WFO Rural Development	---	---	---	---	---	---	---	---	---
Project	---	---	---	---	---	---	---	---	---
Other Construction Programs	697,673	---	---	---	---	---	697,673	---	697,673

BUREAU OF RECLAMATION

Fiscal Year 1985 Proposed Capabilities by Appropriation and Project

Appropriation/Project	Fiscal Year 1985 Request			Additional Capabilities Submitted			Total Capability		
	Federal		Total	Federal		Total	Federal		Total
	Non-Federal	Total		Non-Federal	Total		Non-Federal	Total	
Loan Program Ak-Chin Indian Community, Phase II	---	---	---	2,000	---	2,000	2,000	---	2,000
East Bench Irrigation District, Gravity System No. 1.	---	11	11	1,062	1,740	2,802	1,062	1,751	2,813
Eastern Municipal Water District	9	---	9	8,400	---	8,400	8,409	---	8,409
Gila River Farms, No. 2	---	---	---	1,395	---	1,395	1,395	---	1,395
Hidalgo County Irrigation District, No. 1 (Supplemental)	---	350	350	500	350	850	500	700	1,200
Hidalgo County Irrigation District, No. 6	---	---	---	300	150	450	300	150	450
Roosevelt Irrigation District	4,532	---	4,532	4,100	---	4,100	8,632	---	8,632
Santa Ana Watershed Authority	---	---	---	2,000	---	2,000	2,000	---	2,000
United Water Conservation District	---	---	---	2,500	---	2,500	2,500	---	2,500
Other Loan Programs	62,996	---	62,996	---	---	---	62,996	---	62,996
General Administrative Expenses	---	---	---	---	---	---	---	---	---
Lower Colorado Region Annex Building Addition	---	---	---	300	---	300	300	---	300
OTHER GAE	58,917	---	58,917	---	---	---	58,917	---	58,917

Current Project Status Report

Question: Also provide for the record an updated status, similar to that provided last year, of the various reclamation projects beginning with the initial appraisal level report through completion of preconstruction planning.

Answer: We are pleased to provide the information for the record.
(The information follows:)

Name of Project	Location	Approval/ Special Report	Plan of Study	Plan formulation PPW/PFM/	E.D.'s Rept./FIS 4/	Process Planning dept./FIS 4/	(mm) Clearance	Construction Authorization	Precum- struction Report	Initiate Construc- tion
All-American Canal Relocation (Project Invest.)	CA		xx	x						
Big Sandy River Unit, Colorado River Water Quality Improvement Program (Advance Planning)	WY		x							
Blue Hole Reservoir (Project Investigation)	WY		x							
Central California - Nevada Wind Energy Study (Special Investigation)	CA-NV	xx			(Report released 11/2/83)					
CERDOK (Central South Dakota Water Studies) (Project Investigation)	SD		x							
CERDOK (Advance Planning)	SD		x		x					
Central Valley Fish and Wildlife Management Study (Special Investigation)	CA	xx/								
Central Valley Project, Kellogg Unit Reclamation (Project Investigation)	CA		x							
Central Valley Project, San Joaquin Drainage Investigation (Project Investigation)	CA			x						
Central Valley Project, Shasta Division Enlarged Shasta Lake Investigation (Project Investigation)	CA		x	x		(Study being concluded in FYRA)				
Central Valley Project, Stanislaus Division New Malone Conveyance System (Project Investigation)	CA		xx		x					
Colorado-Big Thompson Pumped-Storage Project, (Project Investigation)	CO		x							
CRSP, Dolores Pumped Storage Unit (Project Investigation)	CO									
CRSP, Generation at Outlet - Fleming Gorge (Project Investigation)	UT			x						
CRSP, Power Peaking Capacity Studies (Project Investigation)	UT, CO WY, AZ		x							

Investigations Under Two-Stage Planning Process										
Name of Project	Location	Approval/ Special Report	Plan of Study	Plan Formulation PPH/PPH/PPH/	R.D.'s Planning Rept./RIS 4/	Process Planning Rept./RIS 4/	OWB Clearance	Construc- tion Auth- orization	Precon- struction Report	Initiate Construc- tion
CRQIP - Big Sandy River Unit (Project Investigation)	WV			X						
CRQIP - Dirty Devil River Unit (Project Investigation)	UT		XX	X						
CRQIP - Glenwood-Botsaro Springs Unit (Project Investigation)	CO			X						
CRQIP - Laverkin Springs Unit (Project Investigation)	UT			X						
CRQIP - Lower Gunnison Basin Unit (Project Investigation)	CO									
CRQIP - Lower Virgin River Unit (Project Investigation)	WV, AZ		XX	X	XX	X				
CRQIP - McElmo Creek Unit (Project Invest.)	CO			X						
CRQIP - Meeker Dome Unit (Project Invest.)	CO			X						
CRQIP - Price-San Rafael Rivers Unit (Project Investigation)	UT			X						
CRQIP - Saline Water Use and Disposal Opportunities Unit - Aquatrain (Project Investigation)	AZ, CA, CO WV, NM, UT	X								
CRQIP - Uinta Basin Unit (Project Invest.)	UT			X						
Crow Creek Indian Reservation Area (Project Investigation)	SD		XX	X						
Deep-Carbonate Aquifer Investigation (Special Investigation)	WV	X								
Deep-Carbonate Aquifer Project (Project Investigation) Nevada	WV		XX							
Delta Support Studies (Special Invest.)	CA	X								
Farmers Irrigation District (Special Invest.)	OR	X								
Garrison Diversion Unit, MLI Water Facilities (Project Investigation)	WV									
Geothermal Resources Investigations (Special Investigation)		X		XX						(Report ready for release)

(Report ready for release)

Investigations Under Two-Stage Planning Process

Name of Project	Location	Appraisal/ Special Report	Plan of Study	Plan of Formulation PPM/PPM-1	R.D.'s Planning Dept./ETR 4	Process Planning Dept./ETR 4	ONR Clearance	Construc- tion Auth- orization	Precon- struction Report	Initiate Construc- tion
Guernsey Dam Powerplant Enlargement (Project Investigation)	WY		Study being concluded in FY84							
Hunty Horse Powerplant Enlargement and Regulating Reservoir (Project Investigation)	MT									
Idaho Anadromous Fish Habitat Restoration (Appraisal Investigation)	ID	X		X						
Imperial Irrigation District Canal Lining and System Improvement (Project Investigation)	CA		X							
Kidder County Group Water Study, North Dakota (Special Investigation)	ND	X								
Klamath Project, Upper Klamath Offstream Storage Study (Appraisal Investigation)	OR	X								
Lake Andes-Wagner Unit (Project Invest.)	SD		X							
Lake Andes-Wagner Unit (Advance Planning)	SD		X							
Lake Meredith Salinity Control Project (Project Investigation)	WA-TX									
Lower Colorado River Water Conservation and Efficient Use Program (Special Invest.)	AZ, CA			X					X	
Lower Colorado Water Supply Study (Project Investigation)	WY	X								
Lower Colorado Water Supply Project (Advance Planning)	CA									
Lower Gunnison Basin Unit (CRMOIP), (Advance Planning)	CA			X						
Marlar-Hilk Project (Advance Planning)	CO		X							
Mesa-Delta Municipal and Industrial Ground Water Project (Project Investigation)	MT		X							
	CO		X							

Name of Project		Location	Investigations Under Two-Stage Planning Process								
			Appraisal/ Special Report	Plan of Study	Plan formulation PPNL/ PPMN/	R.D.'s Planning Rept./EIS 4/	Process Planning Rept./EIS 4/	QPR Clearance	Construc- tion Auth- orization	Precoma- struction Report	Initiate Construc- tion
Minidoka Project, North Side Pumping Division Extension (Project Investigation)		ID		XX	X	X					
North Platte River Hydroelectric Study (Project Investigation)		MT			X						
Northwest Oklahoma Water Supply Project (Project Investigation)		OK									
Nueces River Basin Study (Special Invest.)		TX	XX	X							
Offstream Storage, Yellowstone River (Appraisal Investigation)		MT	X			(Report released 2-6-84)					
Palisades Project, Palisades Powerplant Enlargement (Advance Planning)		MT	X	X							
Platte River Water Use Options (Special Investigation)		NE	X							X	
Prairie Bend Unit (Project Investigation)		NE		XX	X						
Rapid City Regional Water Supply (Project Investigation)		SD		XX	X						
Republican River Basin Water Management Study (Special Investigation)		KS, CO	X								
Rogue River Basin, Grants Pass Division (Project Investigation)		OR			X						
San Joaquin Conveyance Study (Project Investigation)		CA			X						
Santa Margarita Project (Project Invest.)		CA			X		XX	X			
Seward Project (Advance Planning)		OK		X							
Solomon River Basin Water Management Study (Special Investigation)		KS	X								
South Dakota Water Deliveries Study (Project Investigation)		SD		X	XX						
Southeast Oklahoma Water Supply and Distribution Study (Project Investigation)		OK		X							
Texas Basins Project, Medias Project (Project Investigation)		TX		XX	X						

New Contract Awards for 1985

Question: The Committee would also like for you to provide a list showing the new contracts the Bureau plans to award in the remainder of 1984 and those planned for fiscal year 1985. Please provide the information in a format similar to that provided last year.

Answer: We would be happy to provide that. (The information follows:)

FISCAL YEAR 1984 NEW CONSTRUCTION AWARDS
WITH TOTAL COSTS IN EXCESS OF \$1,000,000

3rd & 4th QUARTER FISCAL YEAR 1984
(Dollars in Thousands)

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Buffalo Bill Dam Modifications	Quarry and Stockpile Riprap	8/84	3,530	10
Central Arizona Project, Non-Indian Distribution Systems	Westside Canal Centennial Reach	8/84	3,012	512
	District Link Canal	4/84	3,581	3,331
	Marquahala Valley Road Canal	6/84	1,933	1,933
Chief Joseph Project, Oroville-Tonasket Unit	Construct Osoyoos Pumping Plant	4/84	2,500	400
	Construct Osoyoos Distribution System	4/84	13,955	3,550
Fryingpan-Arkansas Project	Fish Hatchery Building	9/84	2,600	1,350
Garrison Diversion Unit, P-SMBP	Relocate Wells County Roads	8/84	1,130	25
	Reach 1A - New Rockford Canal	9/84	8,070	100
	McClusky Canal Slide Repair	6/84	2,500	400
	Oakes Test Area Distribution System	4/84	12,500	1,600
	Relocate Sheridan County Roads	8/84	1,760	25
Columbia Basin Project, Third Powerplant	Area 4 Shafts	9/84	4,200	100
Headgate Rock Hydroelectric Power Project	Furnish and Install Turbines & Generators	5/84	19,500	2,500
Mueces River Project	Callihan Area Facilities	8/84	7,800	1,661
Central Valley Project, Sacramento River Division	Construct Westside Irrigation District #2	4/84	3,000	1,125
Central Valley Project, San Felipe Division	Construct Hollister Conduit Section 2	9/84	16,000	3,160
	Construct Pacheco Conduit Section 2	6/84	12,000	4,000
	Construct San Justo Dam & Reservoir	9/84	23,000	1,240
Central Valley Project, San Luis Unit	Raise Canal Structures	8/84	3,500	3,000
	Repair/Replace Drain Pipe	9/84	1,000	230
San Luis Valley Project, Closed Basin Division	Construct Distribution Line Stage 1 & 2, Phase I	9/84	1,415	100
Velarde Community Ditch Project	Construct Dams 4, 7, & 8	6/84	2,000	1,403
Harlingen Irrigation District Project	Rehabilitate Laterals & Drains	9/84	2,349	150
Helena Valley Unit, P-SMBP	Rehabilitate Helena Valley Facilities	5/84	1,788	134
Salt River Project, Roosevelt Water Conservation District	Rehabilitate Canals	4/84	7,474	1,200
Strawberry Valley Project	Replace Diversion Structure	9/84	2,852	423
Yakima Project, Grandview Irrigation District	Replace Main Pump Discharge Line	5/84	1,215	236
Yakima Project, Granger Irrigation District	Replace 3 miles of Lateral Distribution System	4/84	1,287	122
Colorado River Front Work & Levee System	Relocate Yuma County Water Users' Headquarters	8/84	1,500	1,500
Eden Project	Big Sandy Dam Spillway Modification	6/84	2,596	160
Gila Project	Drainage Enhancement for Melton-Mohawk Irrigation & Drainage District	8/84	3,322	900
Klamath Project	East Unit Subsurface Drains	8/84	1,100	399
San Angelo Project, Twin Buttes Dam	Pipe Collector Drain System	4/84	2,152	1,312
Minidoka Project, Inland Park Dam	Replace Materials in Right Dam Abutment	6/84	2,450	1,400
Orland Project, Stony Gorge Dam	Rehabilitate Stony Gorge Dam	7/84	2,273	1,800
Colorado River Salinity Control Program, Title I Division	Mittry Lake Development	9/84	1,990	200
Central Utah Project, Bonneville Unit	North Fork Siphon	7/84	8,650	1,550
	Fifth Water Exploratory Shaft	6/84	8,000	2,400

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1984 AMOUNT
Central Utah Project, Jensen Unit	Construct Tyzack Aqueduct Reach 2	6/84	2,000	910
Dolores Project	Dolores Landfill & Protective Dike	6/84	1,615	966
	Anasazi Heritage Center	8/84	1,600	200
Central Arizona Project	Prime Contract - Picacho Pumping Plant	4/84	17,720	6,707
	Pumps & Motors - Brady Pumping Plant	4/84	7,141	25
	Pumps & Motors - Picacho Pumping Plant	4/84	7,024	25
	Pumps & Motors - Red Rock Pumping Plant	4/84	5,854	25
	Prime Contract - Brady Pumping Plant	8/84	15,641	252
	Granite Reef Aqueduct Wildlife Fencing Reaches 1-5	5/84	4,903	3,490
	Granite Reef Aqueduct Wildlife Fencing Reach 6	6/84	1,180	1,180
	Granite Reef Aqueduct Wildlife Fencing Reaches 8-9	8/84	1,684	170
	Prime Contract - Salt-Gila Turnouts	7/84	5,496	916
	Prime Contract - Salt-Gila Power Cables	7/84	1,970	100
	Prime Contract - Tucson Reach 1, Stations 110, to 370	6/84	12,000	1,225
	Warehouse/Heavy Equipment Shop	9/84	10,400	400

FISCAL YEAR 1985 NEW CONSTRUCTION CONTRACT AWARDS
WITH TOTAL COSTS IN EXCESS OF \$1,000,000
(Dollars in Thousands)

PROJECT	CONTRACT DESCRIPTION	AWARD DATE	TOTAL ESTIMATED COST	FY 1985 AMOUNT
Boulder Canyon Project Improvement	Upgrade 4 Turbine Runners	4/85	3,954	850
	Upgrade 6 Transformers	5/85	11,494	900
Brantley Project	Relocate Railroad	6/85	14,671	800
	Habitat Development - Waterfowl Mitigation Phase 2	3/85	1,154	456
	Construct Brantley Dam	11/84	117,540	26,000
Buffalo Bill Dam Modification, P-SMBP	South Fork Dike	9/85	5,540	10
	Buffalo Bill/Shoshone Powerplants	8/85	12,188	50
	Turbines & Generators	6/85	2,700	50
Central Arizona Project, Non-Indian Distribution Systems	Santa Rosa Canal Division A	2/85	12,139	5,525
	Westside Canal, Eagletail Reach	11/84	5,891	5,891
	Westside Laterals	1/85	2,889	2,889
	Irrigation System #6	10/84	11,843	5,282
	Irrigation System #9	10/84	11,843	4,606
	Lateral Systems A & B, New Magma Irrigation & Drainage District	2/85	3,904	2,975
	Eastside Laterals	4/85	1,490	1,490
	Lateral Systems C & D, New Magma Irrigation & Drainage District	6/85	4,806	719
	Pipeline System Lateral D	9/85	2,884	50
	Santa Rosa Distribution System, Maricopa-Stanfield Irrigation & Drainage District	9/85	2,993	43
	Santa Rosa Canal Division B	6/85	10,968	2,704
	Pipeline System, City of Prescott	10/84	5,188	2,594
	Pipeline, Cave Creek Water Company	10/84	1,729	1,153
	Steel Water Tank Reservoir, Cave Creek Water Company	10/84	1,094	729
Columbia Basin Project, Irrigation Facilities	West Canal Enlargement, Phase 2	10/84	1,230	1,230
Fryingpan-Arkansas Project	Pueblo Recreation Facilities	6/85	4,180	750
Garrison Diversion Unit, P-SMBP	Reach 2, New Rockford Canal	4/85	10,430	3,500
	Earthwork & Structures, James River Feeder Canal	4/85	1,365	670
	Tanay Reservoir/Dike/Pumping Plant	5/85	9,200	2,170
	Oakes Canal -- Last 9 miles	5/85	5,300	1,160
	Block 2 Drains -- West Oakes Test Area	8/85	3,500	250
	New Rockford Canal Lining, Drains, Reach 18	4/85	4,000	1,900

<u>PROJECT</u>	<u>CONTRACT DESCRIPTION</u>	<u>AWARD DATE</u>	<u>TOTAL ESTIMATED COST</u>	<u>FY 1985 AMOUNT</u>
Columbia Basin Project, Grand Coulee Third Powerplant	Replace Defective Winding G-19	4/85	3,000	1,440
	Engineering Building	2/85	1,575	1,575
	New Excitation Transformer for 3rd Powerplant Units	6/85	1,330	250
	Multipurpose Shop Building	4/85	3,150	645
Headgate Rock Hydroelectric Power Project	Powerplant/Transmission Lines	11/84	21,700	4,000
McGee Creek Project	Construct Recreation Facilities, Phase II	10/84	1,602	1,602
	West Side Road Phase 10	5/85	1,600	600
	West Side Road Bridge	6/85	1,000	300
North Loup Division, P-SMBP	Geranium Canal, Laterals, Pumping Plant	2/85	14,890	3,370
	Operating Equipment	11/84	2,150	680
Central Valley Project, Sacramento River Division	Construct Colusa County Water District Pumping Plants, Contract 3	1/85	2,530	1,740
	Tehama-Colusa Canal Headworks Enlargement	11/84	1,582	1,582
Central Valley Project, San Felipe Division	Construct Coyote Pumping Plant	12/84	13,800	7,080
San Luis Project, Closed Basin Division	Construct Laterals Stage 3	5/85	3,749	1,281
	Construct Canals Stage 3	7/85	3,726	2,398
	Furnish & Install Pumps/Prime Movers, Stage 3	5/85	1,068	468
	Construct Distribution Lines, Stage 3	5/85	1,000	745
Santa Margarita Project	Road Relocation	9/85	17,560	100
Velarde Community Ditch Project	Construct Dams 1, 2, 3, 5 & 6	8/85	7,712	38
Canyon Ferry Unit, P-SMBP	Repair Dikes, Contract 2	10/84	1,860	100
Colorado River Front Work & Levee System	Levee Armoring & Protection Program	10/84	4,853	4,853
	Levee Armoring & Protection Program #1			
	Levee Armoring & Protection Program #2	11/84	4,530	4,530
	Levee Armoring & Protection Program #3	2/85	3,570	2,439
	Riprap Placement #1	10/84	1,200	1,200
	Riprap Placement #2	10/84	1,200	1,200
Farwell Unit, P-SMBP	Riprap Placement #3	10/84	1,100	1,100
	Canal Lining & Pipe	2/85	1,610	100
Sun River Project, Fort Shaw Division	Fort Shaw Irrigation District	12/84	1,249	178
Washita Project, Foss Dam	Toe Drains	3/85	1,500	600
Colorado-Dig Thompson Project	Raise Horsetooth Dam	3/85	2,886	1,310
Minidoka Project, Jackson Lake Dam	Downstream Crossing	6/85	1,000	700
	Develop Camp	3/85	1,400	800
Newton Project	Service/Emergency Spillway	8/85	1,754	386
Rapid Valley Unit, Pactola Dam, P-SMBP	Prime Contract, Pactola Dam	1/85	6,200	1,078
W C Austin Project, Altus Dam	Stage 1 Modify Controls & Structures	5/85	1,500	500
Colorado River Basin Salinity Control Program, Title I Division	Pretreatment Plant & Desalting Building	5/85	58,100	8,000
CRBSCP, Las Vegas Wash Unit	Construct Bypass Channel	1/85	4,415	2,108
CRBSCP, Paradox Valley Unit	Deep Well Number 1	3/85	10,403	10,403
Central Utah Project, Bonneville Unit	Breach Strawberry Dam	4/85	1,095	657
	Monks Hollow Foundation Tunnel	3/85	2,000	737
	Hades Creek Stream Inlet	8/85	2,559	466
	Duchessne Feeder Canal Rehabilitation	8/85	3,600	450
	Farm Creek Canal Rehabilitation	3/85	1,735	506
	Raise Crest of Current Creek Dam	7/85	1,370	343
	West Side Road Surfacing	5/85	1,540	1,283
	Administrative Building at Strawberry Dam	6/85	1,224	506

<u>PROJECT</u>	<u>CONTRACT DESCRIPTION</u>	<u>AWARD DATE</u>	<u>TOTAL ESTIMATED COST</u>	<u>FY 1995 AMOUNT</u>
Dolores Project	Fairview Pumping Plant & Laterals	10/84	7,317	3,295
	Dove Creek Canal -- Reach II	1/85	4,940	3,440
	Dolores-Norwood-May Canyon Roads	10/84	4,215	3,215
	Cahone Pumping Plant & Laterals	12/84	5,743	2,209
	Powerplant - McPhee Dam	2/85	1,589	706
	House Creek Recreation Facility	10/84	2,242	415
Modifications & Additions to Completed Facilities	Major Grouting at Navajo Dam	1/85	2,765	1,185
Central Arizona Project	Prime Contract -- Salt River	6/85	7,696	367
	Santa Rosa Canal Division B	6/85	11,783	1,500
	Prime Contract -- Red Rock Pumping Plant	4/85	13,860	2,132
	Prime Contract -- ED-2, Substation Modifications	3/85	1,607	300
	Prime Contract -- ED-2, Saguaro #2	3/85	5,710	1,077
	Prime Contract -- Tucson Reach 1	2/85	9,410	2,850
	Prime Contract -- Tucson Reach 2	2/85	28,349	7,850
	Prime Contract -- Tucson Reach 3	9/85	18,619	248
	Repair & Cleanup -- Salt-Gila Aqueduct	6/85	1,500	250
	Santa Rosa Canal Division A	2/85	12,517	2,735
	Ak-Chin Link Pipeline	10/84	1,000	1,000

Activities Contingent Upon Authorizing Legislation

Question: Provide for the record a list of all programs, projects or activities for which funds are requested in the 1985 budget, the use of which is contingent upon enactment of authorizing legislation.

Answer: In the proposed fiscal year 1985 budget, the only three program items which are contingent upon the enactment of authorizing legislation are the Santa Margarita Project in California, the Boulder Canyon Project Improvements in Arizona and Nevada, and the Palisades Powerplant Enlargement Project in Idaho. All other construction, operation and maintenance, general investigations, loan program, and administrative support program items have sufficient legislative authority to expend funds that have been appropriated.

O'Neill Unit, Nebraska

Question: Update the committee on the current status and schedule for the State-led study of possible alternatives related to the O'Neill project in Nebraska. Are sufficient resources available in the 1985 budget to maintain the schedule anticipated by action on the 1984 Appropriation Bill?

Answer: A grant agreement was executed with the State of Nebraska, Department of Water Resources, on August 11, 1983. The study is progressing on schedule and completion is scheduled for January 31, 1985. The Bureau of Reclamation continues to respond as needed to State requests for data and assistance. Funds for this effort either will be transferred or obligated totally by the end of fiscal year 1984. The final report will be completed by the State of Nebraska using available funds in fiscal year 1985. Yes, resources are sufficient to maintain the schedule of activities.

Aquatrains Project

Question: Update the Committee on your activities related to the Aquatrains Project which the Bureau began work on in July 1982.

Answer: Aquatrains is a potential pipeline system to divert saline water from the Colorado River and carry it to points of beneficial use, while also providing an economically competitive method for transporting western coal and potentially other commodities to domestic and possibly export markets. Liquid carbon dioxide might be used as the transport medium.

In November 1983, the private sector interest in Aquatrains was transferred from W.R. Grace to Western Water Reserves, Inc., of Boulder, Colorado. Reclamation released W.R. Grace from a prior cooperative agreement and on January 30, 1984, a cooperative agreement was signed between Reclamation and Western Water Reserves, Inc.

A preliminary corridor study will be completed by the Bureau of Land Management, which is cooperating with Reclamation during the planning process to identify rights-of-way and perform environmental studies.

Western Water Reserves, Inc., is seeking venture partnerships with other private interests to broaden industry participation and fund construction.

Public involvement efforts continue with ongoing dialogue between affected Federal entities, States, counties, and municipalities to incorporate the public interests into formulation of the project plan. Other affected or interested entities and individuals also are being kept abreast of project developments.

Question: How much funding and what work is planned in 1985?

Answer: In fiscal year 1985 \$1,000,000 is the required funding. Work will involve collection of site-specific technical and environmental data along proposed corridor routes. Design data and cost estimates will be developed. An environmental impact statement will be completed.

Central Arizona Project

Question: What is the Department's and Administration's position regarding construction of the project beyond Phase A and providing full water deliveries to Tucson as envisioned in the authorized project?

Answer: Our present schedule calls for delivery of Central Arizona Project water to the City of Tucson in late 1991. The Department currently feels that the project is comprised of the most acceptable distribution and drainage systems necessary to convey project water to future users.

Question: The budget justification material indicates that completion of Tucson Aqueduct Phase B environmental impact statement is the remaining critical activity that affects delivery of project water to the Tucson area. Has the schedule completion and review of the EIS changed in any way from that envisioned by Senate Committee direction or appropriation for 1984?

Answer: The Budget Justifications supplied with the President's FY 1984 budget request indicated the draft EIS would be filed with EPA in November 1984, and the final EIS filed in August, 1985. The documents are currently on schedule, and those dates remain valid.

Question: What is the detailed schedule for completing the Tucson Aqueduct-Phase B EIS? Can the schedule be compressed in any way?

Answer: (The information follows:)

Schedule for Completion of Tucson Aqueduct Phase B EIS

<u>Activity</u>	<u>Date</u>
1. File Draft EIS	November 1984
2. 90-Day Public Review Period and Hearing on Draft EIS	November 1984 to February 1985
3. File Final EIS	August 1985
4. 30-day Public Review and Comment Period on Final EIS	August 1985
5. Record of Decision	September 1985

In terms of meeting NEPA and the CEQ Regulations, we consider this schedule to already be a tight timetable for preparing and processing the EIS to final and completing the Record of Decision.

Question: What is your schedule for initiating construction of Phase B of the Tucson Aqueduct?

Answer: In fiscal year 1985, the final environmental impact statement for Tucson Aqueduct Phase B will be filed. Construction of the first reach of the aqueduct is scheduled to begin in fiscal year 1986.

Question: What action can be taken to accelerate this schedule?

Answer: With regard to expediting construction, the fiscal year 1985 budget request represents our full capability. The Bureau's ability to award additional contracts in fiscal year 1985 is not constrained by funding. The immediate constraints are related to the time required to complete the planning and environmental processes on the divisions of the project where the planning process has been completed.

Question: Now, Congress directed the Secretary of the Interior and the Commissioner of Reclamation to "proceed with construction of the Tucson Aqueduct ..." and laid out specific work which the Committee and Congress expected to be initiated. Have these instructions been carried out as directed?

Answer: I am proud to tell you that the project, including the Navajo Project Participation Agreement, is 50% complete and that the Department and Bureau are both moving ahead in support of completing construction as directed by Congress.

Question: Why were you unable to begin construction on the Red Rock pumping plant in 1984? Would it be possible to begin construction in fiscal year 1984 and if so what would be required?

Answer: Because of funding constraints, the Bureau did not propose to begin construction on the Red Rock pumping plant until after FY 1984. However, with the Congressional write-in of \$5,000,000 funds were provided for the Red Rock pumping plant and the first award on the plant is scheduled in April 1984. Specifically, construction will be initiated on the motor-driven pumping units for the pumping plant.

Question: Are you experiencing any problems related to canal alignment on the purchase of lands and rights-of-way which are causing major problems?

Answer: We are experiencing no problems.

Question: Provide for the record a detailed listing showing the scheduled milestones (by major reach) for completing preconstruction activities and initiating construction on the Tucson Aqueduct?

Answer: (The information follows:)

Preconstruction Activity Schedule

<u>Feature</u>	<u>Complete Data Collection</u>	<u>Complete Design Activities</u>	<u>Complete Specification Designs</u>	<u>Award Contract</u>	<u>Initiate Construction</u>	<u>Project Completion</u>
Tucson Reach 1 Sta 110-370	--	--	2/84	6/84	7/84	10/85
Sta 371-661	--	7/84	10/84	2/85	3/85	1/87
Tucson Reach 2	--	7/84	10/84	2/85	3/85	1/87
Tucson Reach 3	--	1/85	5/85	9/85	10/85	7/87
Tucson Reach 4	6/84	5/85	9/85	1/86	2/86	1/88
Tucson Reach 5	8/85	8/86	12/86	4/87	5/87	4/89
Tucson Reach 6	11/86	11/87	3/88	7/88	8/88	7/90

Before water can be delivered to the Tucson area, an environmental impact statement will have to be prepared. Under our present schedule, a draft environmental impact statement will be filed in November 1984 and a final prepared by August 1985.

└─ Deep-Carbonate Aquifer Project, Nevada ─┘

Question: The justification material supporting initiation of the Deep-Carbonate Aquifer study in Nevada indicates a reluctance on the part of State and local interests to participate financially in this effort. In light of the clear need, as spelled out in justification material, why do you plan to initiate this study when local support is questionable?

Answer: Apparently our justification material did not provide sufficient information. State and local entities have established development of the carbonate aquifers as their top priority in meeting future water needs and have indicated willingness to participate financially. Reclamation has discussions underway, most recently in a meeting on February 14, with representatives of the State of Nevada, Clark County, the Las Vegas Valley Water District, the Nevada Department of Conservation and Natural Resources, and the Colorado River Commission of Nevada.

Question: Isn't this inconsistent with the Bureau's stated goals of placing highest priority on those studies that have strong local and a high potential for non-Federal cost sharing?

Answer: Because there is non reluctance by State and local interests to participate to their maximum resources, inclusion of the program in the FY 1985 budget is consistent with our requirement for strong local support and a high potential for non-Federal cost sharing.

The positive support indicated by financial participation, is in part due to the awareness of the entities that development of the Deep-Carbonate Aquifer appears to be the most viable and cost effective means of providing additional near term peaking capacity and long term supplies for the area.

CENDAK Study, South Dakota

Question: Update the Committee on the progress being made on the CENDAK study in South Dakota.

What is the potential for additional irrigation development?

Answer: Legislation to authorize construction of a plan to serve an irrigated area of 474,000 acres was introduced in both the House and Senate on November 18, 1983 (H.R. 4497 and S. 2189). The 474,000-acre plan was the largest plan formulated during the plan formulation process.

Question: Can you tell the Committee anything about the level of local support for additional irrigation development?

Answer: There is strong local support for a project to serve 474,000 acres. There doesn't appear to be any local interest in a project larger than 474,000 acres.

BUFFALO BILL DAM, WYOMING

Question: I note that the State of Wyoming is prepared to provide "\$47 million, or as much thereof as may be necessary" to pay the State's share of local costs on the Buffalo Bill Dam project in Wyoming. What is the status of negotiations to determine the exact amount of State cost-sharing?

Answer: Although contract negotiations have been essentially completed, officials of the State of Wyoming have indicated that the contract will not be signed until Federal construction funds are appropriated. The existing contract would obligate the State of Wyoming to contribute a maximum of \$47 million as its financial participation in the project. These funds have already been appropriated and Wyoming is prepared to transfer these funds to the United States at a rate of \$786 for every \$1,000 appropriated by the Federal government. There is sufficient flexibility in the contract to allow for increases in the State's financial participation should cost contingencies arise.

Question: Is project construction contingent upon further congressional authorization?

Answer: Although sufficient legislative authority exists which authorizes the Bureau of Reclamation to make modifications to Buffalo Bill Dam unless Congress appropriates construction funds, the State of Wyoming has indicated that it will refrain from ratifying a contract which obligates the state to financial participation and cost repayment of the project.

Lower Gunnison Basin Unit (Winter Water), Colorado

Question: The justification material for the Lower Gunnison Basin Unit Salinity project indicates an annual cost per milligram per liter of salinity reduction of \$56,000 and a \$5.70 annual cost per ton of salt removed. Can you provide a more understandable basis of comparison? How does this cost compare to your other salinity control projects?

Answer: We are using the comparison shown to indicate the cost effectiveness of each unit involved in salinity control for the Colorado River. The \$56,000 and \$5.70 cost figures that appear in the justification material are 1984 figures, which are indexed using an inflation factor to provide current dollar figures. As part of the Federal Water Pollution Control Act and subsequent acts, water quality criteria were adopted by the Basin States and approved by the Environmental Protection Agency. That criteria established water quality in terms of milligrams per liter (mg/l) of total dissolved solids (TDS) at three locations along the Colorado River. Those locations and respective TDS criteria are: below Hoover Dam 723 mg/l, below Parker Dam 747 mg/l, and at Imperial Dam 879 mg/l. In 1981 the TDS at Imperial Dam averaged about 816 mg/l and projections indicate with upstream development a level of 1089 mg/l might be reached. The difference between the 879 mg/l and the projected 1089 mg/l equals about 2.5 million tons of dissolved salt in the river water. To preclude that from happening, those salinity control units which have been authorized are under construction and additional units are being studied. The list of salinity control units provides a comparison of the various units in cost-effectiveness, salinity reduction and tons of salt removal. The tons of salt removed that is shown in the last column of the following table are current estimates. (The information follows:)

Cost-effectiveness for Reclamation salinity control projects

Unit	Primary features	Cost-effectiveness in dollars per mg/L (1981)	Salinity reduction at Imperial Dam (mg/L) 1/	Tons of salt removed
Paradox Valley	Deep well Injection	\$100,000-250,000	18	180,000
Grand Valley (Stage I) (overall)	Canal/lateral lining	*644,000 560,000	2.5 27	24,000 280,000
Las Vegas Wash	Bypass channels	96,000-107,000	6.2	71,000
LaVerkin Springs	Desalting/ponds	1,480,000	2/ 8.4	103,000
Lower Gunnison Basin	Canal/lateral lining Recommended plan	762,000	14	141,000
Uinta Basin	Selective canal/lateral lining	900,900	2.4	24,000
McElmo Creek Basin	Combining canals/selective lining	769,000	2.4	24,000
Palo Verde Irrigation District (10 percent of area)	Lateral lining + onfarm + IMS (Joint project with SCS)	281,000	8	4/ 67,400
Glenwood-Hotseru Springs	Collection/evaporation ponds (preferred plan)	852,000	31	314,000
Big Sandy River	Industrial use	668,000	8	75,000
Saline water use and disposal opportunities 3/	Local use for energy development Long distance export disposal Coal slurry pipeline	520,000-880,000 1,850,000-5,130,000 240,000-518,000	84 77-194 15-50	878,000 768,000-1,975,000 351,000-531,000

* The \$644,000 is the latest cost-effectiveness figure available and is different than presented on page 43.

1/ All concentration reductions were calculated using CRSS projected 2010 flow and salt load conditions. The concentrating effect of water depletion was not considered in this calculation.

2/ Annual equivalent value of salinity reduction. The ultimate value after a 22-year buildup period would be 11 mg/L.

3/ Early appraisal or inventory estimates.

CARRYOVER BALANCE

Question: You are showing a carryover balance of about \$5.7 million from fiscal year 1983 to fiscal year 1984 in your general investigation program. What was the reason for the carryover?

Answer: Most of the carryover (\$4.0 million) was in connection with the National Water Research Program under Engineering and Research. This is the water research grant and contract program that was transferred to the Bureau in August 1982 when the Office of Water Research and Technology was abolished by Secretarial Order. The Congress wrote in an appropriation of \$6 million to continue the program in fiscal year 1983, the funds to remain available until expended. An announcement for research proposals was issued in March 1983 and there was not sufficient time to evaluate all of the proposals received and get the funds obligated by the end of fiscal year 1983.

The remainder is a result of a need to perform more contracting of professional engineering services for our studies. We are experiencing delays because of the time required to process specifications, perform competitive list evaluations and negotiate contracts.

COST SHARING INVESTIGATION COSTS

Question: With regard to non-federal cost sharing of planning studies, please describe your policy on cost-sharing, particularly as it relates to Reclamation's General Investigations program.

Answer: On January 24, 1984, The President announced a new policy on financing and cost-sharing for water resource development projects. He stressed that the cost incurred by the Federal Government in project planning generally will be shared with project sponsors. Specific arrangements will differ among agencies because of their differing planning, authorizing, and funding procedures.

The Bureau attempts to identify and encourage non-Federal partners to finance portions of studies so that the magnitude of Federal financing of investigations can be reduced. Cost-sharing should be established on a case-by-case basis taking into account the previous commitments of the Federal Government and recognizing the ability of beneficiaries to pay. As for fixed percentages, they may work as targets, overall averages, or general guidelines. But conditions, needs, and resources vary so widely that it ultimately comes down to a case-by-case determination.

COST SHARING OMB - SECRETARIAL AGREEMENT

Question: What cost sharing criteria are you using for your proposed new plan formulation investigations?

Answer: The Bureau of Reclamation will pursue a goal of 50 percent non-Federal cost sharing for each new plan formulation investigation. However, new starts will be considered on a case-by-case basis. Proposed new starts that do not meet the 50 percent criterion must have a written justification approved by the Secretary prior to submission of the budget to OMB. In-kind services qualify as cost sharing if the services received serve to reduce the Federal cost of the study.

NON-FEDERAL FINANCING (Continuing Investigations)

Question: Would you please tell us what kind of non-Federal cost-sharing exists in the fiscal year 1985 continuing general investigation program.

Answer: One project, Prairie Bend Unit has a \$95,000 cash advance for non-Federal financing. Of the remaining continuing investigations approximately 50 percent have or will have in-kind services provided. At this time we have estimated the value of the in-kind services at \$1,800,000. A list will be provided for the record. (The information follows:)

Non-Federal Cost Sharing

<u>Project</u>	<u>TEC</u>	<u>FY 1985 Budget Request</u>	<u>Estimated Non-Federal Cost-Sharing</u>
All American Canal	\$ 550,000	\$ 409,000	In-kind service (IKS)
Bedias Reservoir (TBP)	679,000	275,000	IKS
Blue Holes Reservoir	674,000	420,000	IKS value \$ 500,000
CENDAK	1,291,090	50,000	IKS value \$ 430,000
Central Valley Fish and Wildlife	2,694,967	444,000	IKS
Colorado Coastal Plains	585,245	75,000	IKS value \$ 300,000
CVP, Kellogg Unit	889,729	283,000	IKS
Lake Meredith Salinity	891,333	240,000	IKS
Lower Colorado Water Supply	277,000	50,000	IKS value \$ 250,000
Lower Colorado Water Conservation	2,363,000	180,000	IKS
New Melones Conveyance System	1,303,000	550,000	IKS
Platte River Water Use Options	350,000	150,000	IKS value \$ 175,000
Prairie Bend Unit	1,050,000	350,000	IKS value \$ 145,000
San Jacinto Project (TBP)	804,000	275,000	IKS
Siletz River Basin	550,000	215,000	IKS
South Dakota Water Delivery Study	833,709	200,000	IKS
Texas Big Sandy (TBP)	834,000	250,000	IKS
Umatilla Basin Project	1,177,098	100,000	IKS
Wasatch Front TWM Study	1,118,277	350,000	IKS

NON-FEDERAL FINANCING (NEW STARTS)

Question: Would you please tell us what kind of non-Federal cost-sharing exists in the fiscal year 1985 new starts in the general investigations program.

Answer: Of the 9 new plan formulation and 6 advance planning new starts in fiscal year 1985, all have some form of non-Federal cost sharing.

(The information follows:)

FY 1985
New Starts

(In thousands of Dollars)

Plan Formulation

<u>Project</u>	<u>TEC</u>	<u>FY 85 Budget Request</u>	<u>Cost Sharing</u>
1. Colorado-Big Thompson (LM)	540	100	Expected cash and in-kind services of \$270,000
2. Deep Carbonate Aquifer(LC)	5,000	300	In-kind services valued at 3,000,000
3. Imperial Irrigation Dist. Canal Lining (LC)	1,000	150	In-kind services valued at 235,000
4. Kidder County Ground Water Supply Study (UM)	400	100	In-kind services of \$100,000
5. Mesa-Delta M&I (UC)	1,250	300	Up to \$ 95,000 cash in FY 85
6. Northwest Oklahoma (SW)	670	85	In-kind services valued at 13,000
7. San Joaquin Valley (MP)	1,100	357	\$25,000 cash & \$25,000 IKS
8. Southeast Oklahoma (SW)	725	250	In-kind services valued at \$31,000
9. Westside Irrigation (UM)	260	25	Total of \$85,000 in-kind services

Advance Planning

1. Big Sandy River (CRWQIP)(UC) services	3,000	1,300	\$300,000 cash plus in-kind
2. CENDAK (UM)	6,185	1,950	In-kind services valued at 800,000
3. Colorado Coastal Plains (SW)	2,300	600	In-kind services of 215,000
4. Seward (SW)	2,800	700	Minimum in-kind services of \$100,00
5. Yakima Fish Passage (PN)	1,875	475	Estimated cash of \$890,000 from BPA and 126,000 cash from Washington State
6. Lower Colorado Water Supply (LC)	700	200	In-kind services valued at 250,000

NON-FEDERAL ADVANCES

Questions: You state that you have \$280,000 of non-Federal Advances in the fiscal year 1985 general investigation program. Would you provide us with a breakdown of this money.

Answer: The \$280,000 cash advance is broken down as follows:

Colorado-Big Thompson Powerplant	\$50,000
Mesa-Delta M&I Ground Water Study	95,000
Prairie Bend Unit	95,000
Yakima Fish Passage & Protective Facilities	40,000

GROUND WATER

Question: What activities does the Administration have in the area of Western ground-water management?

Answer: Many of the Department of the Interior's existing water projects (e.g., Central Arizona Project, California's Central Valley Project) address ground-water considerations. Over the years, ground-water management has become an increasingly important component of Bureau of Reclamation projects. Reclamation and the Geological Survey have been sharing information and coordinating their programs to bring about more efficient management of ground-water efforts in the Department. Currently, Reclamation and the Survey are determining how areas of the West can be selected for the demonstration of ground water recharge techniques.

Question: What specific actions are you taking to address ground-water supply needs in the High Plains/Ogallala Region of the West?

Answer: We in the Administration know that ground-water depletion is a severe problem in the High Plains. However, we also find that dwindling ground-water reserves are just as serious in other parts of the West and, indeed, are a growing national concern. It is important to keep in mind that management of ground water is a State right and responsibility. The Federal government will assist

the States in solving their ground-water problems, but will not usurp their authority. In addition to the consideration of ground-water in all investigations underway in the region, H.R. 71, now under Senate consideration, would direct the Department of the Interior, through the Bureau of Reclamation, to develop a plan of projects to demonstrate the feasibility of recharging Western ground-water tables. As I mentioned before, Reclamation and the Survey are jointly planning ground-water management initiative, not only in response to H.R. 71, but also to put in place a permanent Department mechanism to deal with all manner of ground-water issues.

NEW GENERAL INVESTIGATIONS

Question: How many new investigations are proposed in the fiscal year 1985 program?

Answer: There are 9 new plan formulation investigations in the fiscal year 1985 budget and 6 new advance planning investigations. Emphasis of all 15 proposed new investigations will be on municipal and industrial supplies, irrigation, increased power generation capability, ground water productivity and water quality control.

(The information follows:)

FY 1985
GENERAL INVESTIGATIONS NEW STARTS

Project PLAN FORMULATION	Total Estimated Cost	FY 1985 Request	Duration (Years)
1. Mesa-Delta M&I Ground Water, Colorado	\$ 1,250,000	\$ 300,000	4
2. CVP-San, Joaquin Valley Conveyance Study, California	1,100,000	357,000	2
3. Deep Carbonate Aquifer Project, Nevada	2,500,000	300,000	5
4. Imperial Irrigation District Canal Lining, California	1,000,000	150,000	4
5. Northwest Oklahoma Water Supply Project, Oklahoma	670,000	85,000	4
6. Southeast Oklahoma Water Supply Project, Oklahoma	725,000	250,000	3
7. Westside Irrigation Project, Wyoming	260,000	25,000	3
8. Kidder County Groundwater Study, North Dakota	400,000	100,000	3
9. Colorado-Big Thompson Powerplant, Colorado	540,000	100,000	3
ADVANCE PLANNING			
1. Big Sandy River Unit (CRWQIP), Wyoming	3,000,000	1,300,000	3
2. Yakima Fish Passage and Protective Facilities, Washington	1,875,000	475,000	4
3. Lower Colorado Water Supply Project, California	700,000	200,000	2
4. Colorado Coastal Plains Project, Texas	2,300,000	600,000	3
5. Seward Project, Oklahoma	2,800,000	700,000	3
6. Central South Dakota Water Supply, South Dakota	6,185,000	1,950,000	4

REPORTS SUBMITTED TO CONGRESS IN FISCAL YEAR 1983

Question: Of the reports that you completed in fiscal year 1983, how many have you submitted to the Congress showing a possible project?

Answer: In fiscal year 1983, the Bureau of Reclamation completed and released to the Congress and the public 18 planning reports. Of that number, four appraisal or preliminary findings reports considered the potential for feasibility study; two feasibility-level reports were completed and released in accordance with the Flood Control Act of 1944; five special reports, two status reports and one technical memorandum provided information about specific problems or ongoing studies. The remaining four reports were not supportive of continuing with the projects studied.

(The information follows:)

Reports Submitted to the Congress in FY 1983

Appraisal or Preliminary Findings

1. Boca-Prosser Creek Powerplants, California
2. Caballo Dam, Low-head Hydropower Study, New Mexico
3. Whipple Wash Pumped-Storage Project, California
4. El Vado Dam, Low-head Hydropower Study, New Mexico

Feasibility-Level

1. Wind Hydroelectric Energy Project, Wyoming
2. Lower Gunnison Basin Unit, CRWQIP, Colorado

Special

1. Llano Estacado Playa Lake Water Resources Study
2. Central Valley Project Fish and Wildlife Management Study-Anadromous Fish
3. Northern Great Plains Wind Energy Study
4. Central Valley Project Fish and Wildlife Management Study-Anderson-Cottonwood Irrigation District
5. Water Use and Management in the Upper Platte River Basin, Colorado-Wyoming-Nebraska

Status

1. Las Vegas Wash Unit, CRBSCP
2. Colorado River Water Quality Improvement Program (Total Program)

Technical Memorandum

1. Santa Cruz Dam and Reservoir Study, Part 2

Concluding

1. CRSP Power Peaking - Utah Lake Unit
2. CRSP Power Peaking - Glen Canyon Unit
3. Wataasheamu Division, Washoe Project, Nevada
4. Versippl Unit, P-SMBP

PICK-SLOAN MISSOURI BASIN PROGRAM, MODIFICATION OF BUFFALO BILL DAM, WYOMING

Question: As of February 1, 1984, what has been accomplished on Buffalo Bill Dam Modifications?

Answer: The Definite Plan Report was approved on October 14, 1982. The costs and benefits were updated to October 1982 levels in Fiscal Year 1983 as part of the Definite Plan Report. Initial design data for Dam Modifications was completed in September 1983. The cost sharing agreement with the State of Wyoming is essentially complete. The original Definite Plan Report (DPR) indicated that powerplant construction required the reservoir to be drawn down during construction. Reservoir drawdown would place the existing project water users at risk. In addition the location proposed in the DPR for the new powerplant was in a hazardous area. Because of those problems, alternative power plant locations were studied and a supplement to the DPR prepared. At present it is proposed that a new 3-mw powerplant would utilize the existing Shoshone Canyon Conduit as a penstock.

Question: What work is scheduled or underway?

Answer : During this year we will continue study of feasibility of the additional powerplant; supplemental data for the design of the 18-mw powerplant and for design of the modified dam and spillway will be attained; preliminary design studies will be completed; we will begin preparation of designs related to contracts which are prerequisite to powerplant construction; continue to gather water quality information required for alternative designs of dam modifications; complete revisions to the supplement to the Definite Plan Report; complete the environmental assessment required due to changes in the plan described in the supplement; and complete contract negotiations with the State of Wyoming for financial participation and repayment. Advance Planning activities are scheduled to be completed in Fiscal Year 1984.

FARMERS IRRIGATION DISTRICT, OREGON

Question: As of February 1, 1984, what work was accomplished on the Farmers Irrigation District special study?

Answer: We have met with district representatives and inspected the existing irrigation system. The system suffers from large water losses in some areas, and power costs associated with pumping water to farm units are high. We have been working with the district to identify ways to improve the efficiency of the major water supply delivery facilities.

Question: What work is scheduled and underway?

Answer: We are preparing a report on our preliminary findings of alternative ways to improve the major water delivery system. These alternatives will be discussed with the district. When a preferred course of action is selected, we will proceed with the detailed engineering designs and cost estimating and the necessary economic and environmental evaluations as they relate to the major delivery system. Potential funding sources for project implementation will be identified.

Question: What work is scheduled for fiscal year 1985?

Answer: We will complete our detailed engineering, economic, and environmental work and will prepare all necessary project reports.

GUAM WATER RESOURCES STUDY

Question: As of February 1, 1984, what work was accomplished on the Guam Water Resource Study?

Answer : A study team of 8 Bureau professionals has been assembled to conduct the 2 year study. The team has prepared an initial Plan of Study and Public Involvement Plan. The Notice of Initiation of Investigation was issued in December 1983.

The study coordinator opened an office in Agana, Guam in December.

Some study team members initiated studies in Guam. Public involvement activities are under way.

Question: What work is scheduled and underway?

Answer : During the remainder of FY84, team members will conduct preliminary data gathering activities on Guam and complete plan formulation activities.

Question: What work is scheduled for fiscal year 1985?

Answer : During FY85, supporting activities will be completed by each discipline, the preferred plan will be identified and a planning report and environmental assessment prepared.

Question: What is the source of funding for this investigation?

Answer: The estimated cost of the 2-year study is \$700,000. Of that amount, Reclamation is providing \$550,000 and the Office of Territorial and International Affairs is providing \$150,000.

GUAM WATER RESOURCES STUDY

Question: What is the purpose of the studies the Bureau of Reclamation is doing in Guam?

Answer: As a result of a request from the Government of Guam, the Bureau of Reclamation has initiated a 2-year study of water resource development potentials on the island. A study leader, stationed on Guam, will be assisted by personnel from throughout Reclamation, as needed, to gather information and conduct analyses in specialized technical areas. The study will assess irrigation potential, municipal and industrial water supply improvements, hydropower development, flood control, and other multipurpose functions. Information on sustained irrigability of soils, a plan of development for irrigation and municipal and industrial water supplies, economic and marketing analyses, and an assessment of social and environmental effects will be documented in a report.

WIND-HYDROELECTRIC ENERGY PROJECT, WYOMING - STATUS

Question: As of February 1, 1984, what work was accomplished on the Wind-Hydroelectric Energy Project?

Answer: The planning effort for the Wind-Hydroelectric Energy Project was completed in 1981, and Reclamation's report was distributed in October 1982. Wind data collection analysis as well as environmental monitoring continued.

Installation of the Boeing MOD-2 and the Hamilton Standard's WTS-4 wind turbines was completed in 1982.

About 2,000,000 kilowatt-hours of energy have been generated through December 31, 1983, and integrated into the Federal power system.

Question: What work is scheduled and underway?

Answer: Baseline environmental and meteorological data will continue to be collected. The WTS-4 wind turbine unit will continue to be operated and periodically tested under conditional full operation.

The Boeing MOD-2 is currently limited to operation in support of a critical testing program of approximately 100 hours. This limitation has been imposed on the unit to prevent excessive accumulation of operating hours which may lead to the development of a crack in the low-speed shaft.

Boeing Engineering Company has indicated that it will not fund a repair of the low-speed shaft. Reclamation is pursuing discussions with NASA to have DOE support the repair.

Reclamation and Western Area Power Administration have evaluated Extractive Fuels, Inc. initial proposal for the design and construction of a 100 MW wind farm. The proposal in its present form is not feasible and further analysis is scheduled.

Question: What work is scheduled for fiscal year 1985?

Answer: Hamilton-Standard has announced that it will not manufacture any new wind turbines. In the same announcement, the company indicated it would provide support for its existing machine; however, the extent of that support is undefined. Based on both major wind turbine manufacturers' decisions with respect to their involvement at Medicine Bow, the future of the Bureau's involvement in wind energy is questionable.

The Bureau has included \$350,000 under the North Platte Area operation and maintenance program in fiscal year 1985 budget request for future wind energy activities. In light of the new developments in the wind turbine industry, the Bureau is evaluating terminating our involvement at the end of fiscal year 1984 and reprogramming the \$350,000 to support other operation and maintenance activities.

PROGRAM RELATED ENGINEERING AND SCIENTIFIC STUDIES - PROGRAM DESCRIPTION

Question: Describe the Program Related Engineering and Scientific Studies effort.

Answer: This program is directed toward solving planning and engineering problems associated with the Bureau's mission of developing water-related resources in the 17 Western States. The research emphasizes making the best use and reuse of waters; improving water management and irrigation efficiencies; advanced energy applications; understanding and evaluating of economic, sociologic, and environmental aspects of water resources development; water quality; engineering and materials studies; electric power system stability and control; and dam safety. Benefit-cost ratios for this program have been 10:1 in recent years. The proposed \$5,967,000 level of the program represents about one half of 1 percent of the Bureau's budget.

BUREAU RESEARCH - COORDINATION

Question: How is your research coordinated with other Government agencies?

Answer: Bureau engineers and scientists actively coordinate research with

the Corps of Engineers, Tennessee Valley Authority, and Bonneville Power Administration, who have mission-oriented activities like the Bureau's. Formal coordination meetings have been held every other year with the Corps and Tennessee Valley Authority since 1960 and in recent years with Bonneville Power Administration. The November 1-3, 1983 meeting in Denver, Colorado, was the most recent; the next meeting will be held in Knoxville, Tennessee, in November 1985. Current and proposed research studies are reviewed to determine areas of mutual interest and interaction, to exchange information, and to prevent undesirable duplication of effort.

Additional complementary coordination meetings are held in specific technical areas, such as dam safety, water quality, electric power, reeration, and weed control. The meetings are usually held in years between the biennial conference and involve additional agencies such as Environmental Protection Agency, Bureau of Mines, Fish and Wildlife Service, and the Agricultural Research Service.

The weather modification program is coordinated with other agencies through the Office of Federal Coordinator for Meteorology and there is a close working relationship with the National Oceanic and Atmospheric Administration and the National Center for Atmospheric Research - National Science Foundation. Working coordination includes sharing of equipment, facilities, and computer programs and participation in joint experiments. The Bureau has a \$700,000 cooperative atmospheric research program with the Federal Aviation Administration in radar detection of turbulence and icing which also will aid cloud seeding studies. Also, the Bureau personnel will be the technical managers for a 5-year, \$5 million weather modification demonstration program in Morroco for the Agency for International Development.

BOULDER CANYON PROJECT-IMPROVEMENTS, ARIZONA-NEVADA

Question: As of February 1, 1984, what work was accomplished on the Boulder Canyon Project-Improvements program?

Answer: Authorization to proceed with preconstruction activity in advance of project authorization was provided in the Conference Report to the fiscal year 1984 Supplemental Appropriation Act (P.L. 98-181). We have initiated our field review process and are proceeding with our preliminary design data gathering procedures.

Question: What work is scheduled and underway on the Boulder Canyon Project-Improvements program?

Answer: Only preconstruction work is presently underway. This consists of field engineering and the collection of design data based on field conditions. We will have one or two minor A&E contracts to assist in the engineering process.

Question: What work is scheduled for fiscal year 1985 on the Boulder Canyon Project-Improvements program?

Answer: We anticipate the award of two contracts under the uprating program. These contracts will be for furnishing four uprated turbine runners; and for furnishing six uprated transformers. Preconstruction work will continue on the facility improvements.

CENTRAL VALLEY PROJECT, AUBURN-FOLSOM SOUTH UNIT, CALIFORNIA

Question: As of February 1, 1984, what construction work was accomplished on the Auburn-Folsom South Unit?

Answer: The project is 25 percent complete. The first two reaches (about 27 miles) of the Folsom South Canal have been completed and are in service. The Auburn-Foresthill bridge has been completed and about 7 miles of State, county, and city roads have been relocated in the vicinity of Auburn, California. Construction of Sugar Pine Dam, Sugar Pine and Foresthill Main Conveyance Systems, and the Foresthill water treatment building is completed. About 80 percent of the land has been acquired for Auburn Dam and Reservoir area. Construction of Auburn Dam Diversion Tunnel and excavation and foundation treatment for the Auburn Dam and Powerplant have been

completed. Seismic studies for evaluating the maximum credible earthquake at Auburn damsite have been completed and seismic parameters have been established. Alternative designs to meet the seismic safety standards have been completed.

Question: What work is scheduled and underway?

Answer: In fiscal year 1984, construction of recreation facilities at Sugar Pine Reservoir will be completed.

Question: What work is scheduled for fiscal year 1985?

Answer: In fiscal year 1985, the \$3.5 million scheduled for Auburn will be used for the Regional staff to perform onsite analysis and investigations in conjunction with the designers. Designs and related technical investigations for Auburn Dam and Powerplant will begin. Also included are costs for the maintenance and operations of existing facilities and equipment for management of Government resources.

CENTRAL VALLEY PROJECT, AUBURN-FOLSOM SOUTH UNIT, CALIFORNIA

Question: Will additional legislation be required for Auburn Dam?

Answer: Yes. Reauthorization will be required to increase the appropriation ceiling before construction of Auburn Dam can begin. In addition, reauthorization is required to incorporate protection of river flows in the Lower American River as a project purpose. A plan has been developed which would protect the existing Lower American River flows. The current plan involves additional facilities and purposes not now included in the Unit's authorizing act and, hence, further authority will be required before they can be implemented.

Reauthorization will also be required to permit non-Federal cost-sharing proposals for the Unit. We are currently working toward non-Federal cost-sharing arrangements with several agencies and organizations who have indicated a willingness to participate financially in the Unit.

Congressman Shumway recently introduced legislation reauthorizing the Unit that includes the pursuing of non-Federal cost-sharing arrangements, along with the other modifications needed for proceeding with project construction.

CENTRAL VALLEY PROJECT, AUBURN-FOLSOM SOUTH UNIT, CALIFORNIA

Question: Have any non-Federal entities expressed interest in financial participation in the construction of Auburn Dam?

Answer: There has been widespread interest in financial participation in the project. A series of meetings were held with a number of non-Federal entities to inform them about the estimated costs and projected accomplishments of the Auburn-Folsom South Unit and the need to obtain non-Federal financing to initiate construction. Letters of intent to participate financially in the construction of the project have been received from the following non-Federal entities: American River Authority, Sacramento Municipal Utility District, East Bay Municipal Utility District, Modesto Irrigation District, American Hydroelectric Development Corporation, and Cushionrail.

In addition, letters of interest have been received from the Mid-Valley Water Authority, Turlock Irrigation District, and the East San Joaquin Water Users Association, which represents several irrigation districts in San Joaquin County. The State of California Department of Water Resources has also expressed interest in participating.

Question: Are you conducting more studies on Auburn Dam?

Answer: Additional studies are being performed to work out the details of non-Federal cost-sharing of the Unit and to determine the effect such cost-sharing proposals would have on both the Unit's features and repayment capability, and on the remainder of the Central Valley Project. In addition, we are completing and processing the Supplemental Environmental Statement which presents plans to

protect the Lower American River and also to meet the Folsom South area water needs.

FRYINGPAN-ARKANSAS PROJECT, COLORADO

Question: In fiscal year 1984 the Congress provided additional funds of \$600,000 to expedite work on the Pueblo Fish Hatchery on the Fryingpan-Arkansas Project. What is the current status?

Answer: During fiscal year 1983, the Bureau and the State of Colorado Division of Wildlife resumed design activities to allow construction of the fish hatchery and related facilities to be initiated during fiscal year 1984.

The construction contracts will be awarded during fiscal year 1984. The first, scheduled for award this spring, will involve the construction of the buildings housing the hatchery equipment, interior fish ponds, and staff quarters and offices. The second, expected to be awarded late this summer, will involve the construction of the outside rearing ponds and related facilities.

Completion of the hatchery is expected in fiscal year 1986.

PICK-SLOAN MISSOURI BASIN PROGRAM, MODIFICATION OF BUFFALO BILL DAM, WYOMING

Question: Does the Bureau have authority to construct three separate powerplants under the present authorization for Buffalo Bill Dam Modifications?

Answer: Yes, P.L. 97-293 states that the old powerplant will be replaced but does not give specific location or capacity of new powerplant(s). Thus, the three separate powerplants fall within the authorization.

PICK-SLOAN MISSOURI BASIN PROGRAM, HEART DIVISION, DICKINSON UNIT, NORTH DAKOTA

Question: In Senate Report No. 98-153 on the Energy and Water Development Appropriation Act of 1984 (P.L. 98-50, dated July 14, 1983), the Committee included the following language regarding the Dickinson Dam Unit:

"Therefore, the Committee directs the Bureau of Reclamation to absorb all costs relating to the operation of the bascule gate and to take the appropriate legal measure to relieve the City of Dickinson of all liability for property damage and personal injury which may result from the operation of the gate."

What have you done as a result of this directive?

Answer: We sought and received a solicitor's opinion regarding compliance with the directives contained in the Report. The opinion stated that the Report language is contrary to specific statutory directives and that the language was of no legal force or effect.

A meeting was held in Dickinson on November 2, 1983, among officials of the City, the Bureau, the State of North Dakota, and representatives of the Congressional delegation. The solicitor's opinion; initial cost; operation, maintenance and replacement cost; and safety of the gate were discussed. The Bureau believes that the gate is serving its intended purpose and can be operated safely.

An accounting of the cost of the gate and an estimate of the average annual operation, maintenance, and replacement costs were provided the City by letter dated December 2, 1983. The Bureau advised the city that it lacks authority to forgive the repayment and annual operating costs associated with the gate.

The Dickinson City Council passed a resolution on December 19, 1983, declaring the Bureau to be in breach of the bascule gate contract and requesting that the gate be replaced with a fixed crest spillway. Our response to this resolution dated January 20, 1984, stated that the Bureau does not have authority to comply with the demands in their resolution; we have not breached the contract; we were obligated by the contract to complete installation of the gate and to initiate repayment terms of the contract once the gate is determined to be completed in accordance with specifications. This response also restated our willingness to work with them in finding a solution which is within our authority and fulfills our contract obligations.

PICK-SLOAN MISSOURI BASIN PROGRAM, GARRISON DIVERSION UNIT, NORTH DAKOTA

Question: As of February 1, 1984, what work was accomplished on the Garrison Diversion Unit?

Answer: Construction of the unit is 26 percent complete. The Snake Creek Pumping Plant, McClusky Canal, and Wintering Dam are essentially complete. A new wildlife mitigation plan has been developed and is being implemented.

Question: What work is scheduled and underway?

Answer: Contract award for Oakes Distribution System is scheduled for April 1984, and award for Reach 1A of New Rockford Canal is scheduled in September 1984. Construction is underway on the Oakes Pumping Plant, Oakes Drains, Reach 1B of New Rockford Canal, and Lonetree Dam. Minor contract work, purchase of fish and wildlife mitigation lands, designs, land acquisition, and other preconstruction activities also are underway.

Question: What work is scheduled for Fiscal Year 1985?

Answer: Construction will continue on Reaches 1A and 1B of New Rockford Canal, Lonetree Dam, and Oakes Distribution System. Design and other preconstruction activities will continue on other features of the project. Contracts are scheduled to be awarded for Taayer Dam, Oakes Canal, Lining for Reach 1B of New Rockford Canal, and Reach 2 of New Rockford Canal which includes James River Feeder Canal.

PICK-SLOAN MISSOURI BASIN PROGRAM, GARRISON DIVERSION UNIT, NORTH DAKOTA

Question: What is the current status of the James River Flood Control Association lawsuit against the Garrison Diversion Unit?

Answer: The James River Flood Control Association vs. James Watt, et al. suit in the United States District Court for the State of South Dakota was dismissed on December 22, 1982. The James River Flood Control Association appealed the District Court decision and, after the 1983 Final Supplemental Environmental Statement was issued, asked and was granted a

motion to remand the case back to the District Court. A ruling on several motions before the District Court is anticipated in the near future. The Federal defendants and Intervenor-defendants, Garrison Diversion Conservancy District, have a motion for summary judgment before the Court.

PICK-SLOAN MISSOURI BASIN PROGRAM, O'NEILL UNIT, NEBRASKA

Question: As of February 1, 1984, what work was accomplished on the O'Neill Unit?

Answer: Only work necessary to remove the court's injunction has been undertaken.

Question: What work is scheduled and underway?

Answer: Work directly mandated by the Congress, namely the study to reduce costs and the alternative study by the State of Nebraska is underway. The alternative study is being funded under the General Investigation appropriation.

Question: What work is scheduled for fiscal year 1985?

Answer: Both the study to reduce costs and the State-led alternative study will continue with completion by January 31, 1985. Upon removal of the injunction and completion of these two studies, we will reinitiate construction activity in accordance with authorizations and Congressional directives in effect at that time.

Question: What is the status of litigation involving the O'Neill Unit?

Answer: The March 1977 court injunction forbidding construction of the O'Neill Unit until the environmental statement has been adequately supplemented remains in force.

The Final Supplement No. 2 to the O'Neill Unit final environmental statement was sent to the District Court on August 13, 1981,

along with a motion to vacate the existing injunction. In April 1982, the plaintiffs filed a motion to amend and supplement their complaint to add eight new issues to the original court action. Seven of the eight additional issues were denied by the Court. The additional issue the court allowed involves investigation of the plaintiff's proposed well field alternative from the perspective of the Clean Water Act.

In June 1983, the court set the trial date to litigate the remaining issues (geologic stability alternatives and Clean Water Act) for February 2, 1984. In November 1983 the United States filed a motion for continuance of the trial until October 1984 while the plaintiffs have requested that the trial be delayed until the spring of 1985. On December 13, 1983, the court responded favorably to the Federal defendant's motion for delay, however, the court docket is full for October and the trial was scheduled for December 3, 1984.

PICK-SLOAN MISSOURI BASIN PROGRAM, O'NEILL SPECIAL STUDIES, NEBRASKA

Question: What is the status of the study to reduce the Federal costs of the authorized O'Neill Unit as requested by the Nebraska delegation?

Answer: The study is underway and will focus upon the development of appropriate detailed information to reduce project costs. The design drawings for the dam have been submitted to the E&R Center and E&R Center personnel are looking at ways to reduce the costs. The Nebraska-Kansas Projects Office, Grand Island, Nebraska is rechecking the canal and lateral sizes and reanalyzing the irrigation district payment capability. This analysis is being conducted concurrently with the State-led study of alternatives.

MCGEE CREEK PROJECT, OKLAHOMA

Question: Additional access roads and \$5 million for the project were authorized by Public Law 98-63, passed July 30, 1983. What is the schedule for construction of these roads?

Answer: Construction of these roads will begin in July 1984 and continue through August 1987. Five contracts will be awarded to accomplish this work.

Question: Why is the construction of these roads to be done in five contracts?

Answer: Smaller contracts will allow us to get portions of this work underway earlier than could be done with one large contract. This will also afford opportunities for smaller contractors to bid on this work.

Question: What steps have been taken to assure National Environmental Policy Act compliance for these access roads?

Answer: The work involved in construction of these roads will have a minimal impact on the existing environment; however, plan development is currently being prepared to address environmental concerns and permit National Environmental Policy Act evaluation.

NARROWS UNIT, PICK-SLOAN MISSOURI BASIN PROGRAM, COLORADO

Question: The Bureau was directed to resume activities in fiscal year 1982 on the Narrows Unit, Colorado, to ready the project for construction. As of February 1, 1984, what work has been accomplished on the Narrows Unit?

Answer: The Bureau reprogrammed funds as directed in fiscal year 1982, and undertook a review and update of data used to support the project plan as recommended in 1976. Coordination with other Federal agencies, such as the Corps of Engineers, Fish and Wildlife Service, and National Park Service, and with appropriate state and local entities was resumed. These activities led to decisions to reduce the flood control storage capacity included in the reservoir, to modify the wildlife mitigation and recreation plans, to modify the design of the

dam, to change the proposed state highway relocation alignment, and to delete the acquisition of Jackson Lake from the project plan. The most significant effect of these revisions is a reduction of 24 percent in the rights-of-way requirements for the project when compared with the 1976 plan.

These activities continued into fiscal year 1983. A draft addendum to the Definite Plan Report describing the updated plan, presenting the project cost estimate, and displaying the economic and financial analysis of the project was completed. A draft supplement to the the 1976 Final Environmental Statement was completed and distributed for public, local, state, and other Federal entity review and comment.

Discussions were initiated with the Lower South Platte and Central Colorado Water Conservancy Districts concerning amending the existing water service contracts, and with appropriate State of Colorado agencies regarding potential cost-sharing arrangements. The districts have initiated discussions with the water users related to the necessary subcontracts for water service.

SANTA MARGARITA PROJECT, CALIFORNIA

Question: As of February 1, 1984, what work was accomplished on the Santa Margarita Project?

Answer: The information in the 1971 feasibility report and 1976 environmental statement is being updated to bring the various aspects of the project up to current standards. A field draft Planning Report/Draft Supplemental Environmental Statement has been prepared for in-house review. The project was found to be economically justified and financially feasible.

Question: What work is scheduled or underway on the Santa Margarita Project?

Answer: The Planning Report/Draft Supplemental Environmental Statement is scheduled to be filed with EPA in April 1984. The Final Planning

Report/Supplemental Environmental Statement is scheduled to be filed with EPA in August 1984.

Question: What work is scheduled in fiscal year 1985 on the Santa Margarita Project?

Answer: A field and materials laboratory will be established. Collection of design data and preparation of specifications will begin on Fallbrook Dam and Reservoir. A contract will be awarded for relocation of a county road around Fallbrook Reservoir. This work will be rescheduled to commence in late fiscal year 1984 if the 1984 Supplemental Request is passed.

Questions: What are the possibilities for cost sharing for the Santa Margarita Project?

Answer: The Fallbrook Public Utility District proposes to contribute land valued at \$8,350,000 and cash in the amount of \$3,000,000 towards project construction. These contributions amount to about 17 percent of the Fallbrook Public Utility District share of project costs, including reimbursable interest during construction. The Navy will contribute construction funds estimated a \$120.7 million as its share of project costs.

Question: We understand some concern has been expressed on economic issues of the Santa Margarita Project. Please describe the issues and explain what is being done to resolve them.

Answer: Major economic issues have centered on the benefit/cost analysis of the project. Specifically, the methodology used in evaluating municipal and industrial water supply benefits has been criticized as resulting in benefits that are too high. Response to the criticism will be provided in the project's Planning Report/Supplemental Environmental Statement and in upcoming congressional hearings considering project authorization.

WEB RURAL WATER DEVELOPMENT PROJECT, SOUTH DAKOTA

Question: As of February 1, 1984, what work was accomplished on the WEB Rural Water Development Project?

Answer: On January 6, 1983, an agreement for the initial Federal grant of \$1.9 million for preconstruction activities became effective. The master grant and repayment contract was signed on September 29, 1983. In accordance with the contract, the Bureau provides oversight in review of plans and designs as it deems necessary to protect the Federal financial interest. The WEB Water Development Association is responsible for planning, designing, constructing, and operating the project. WEB's consulting engineering firm's completed Design Report showed financial feasibility. Design work and rights-of-way acquisition proceeded with funding from local sources. The excavation contract for the Lake Oahe Intake Pumping Plant was completed in November 1983. The \$4,000,000 Congress provided in the fiscal year 1984 Appropriations Bill enabled the Bureau to continue work on designs and specifications for the initial phase project features. Advertisements for bids have been released for the raw water pipeline, the water treatment plant (1st phase), the Lake Oahe Intake Pumping Plant, the secondary transmission and distribution system, and water storage tanks.

VELARDE COMMUNITY DITCH PROJECT, NEW MEXICO

Question: Construction authority and \$3,000,000 for the Velarde Community Ditch Project were written into the fiscal year 1984 Appropriation Bill. What is the status of this project?

Answer: The design for the first three diversion dams are now being prepared by the E&R Center. The designs are scheduled to be completed March 1984 the contract award date is anticipated in June 1984.

Question: What work is scheduled and underway?

Answer: An environmental assessment leading to compliance with the National Environmental Policy Act is underway and is scheduled for

completion by April 1, 1984. Design data on the first three diversion dams have been completed, and designs are underway leading to a contract award by June 1984. Design data on the remaining diversion dams will be completed during fiscal year 1984.

Question: What work is scheduled for fiscal year 1985?

Answer: The plan is to complete the designs and award a contract for the construction of the remaining diversion dams; complete the construction of the first three diversion dams; and inventory and initiate collection of design data on the rehabilitation or replacement of major ditch structures.

ARBUCKLE PROJECT, OKLAHOMA, SULPHUR PIPELINE DIVISION

Question: Appropriations for the Sulphur Pipeline, Arbuckle Project, were written into the fiscal year 1984 program. What is the purpose of this project?

Answer: The purpose is to provide municipal and industrial water supplies to the city of Sulphur which has a water supply entitlement from the original project completed in 1968. Besides a pipeline to Sulphur, Oklahoma, project features include a pumping plant and water treatment plant. Construction of the Sulphur pipeline was provided for under the Arbuckle authorizing legislation.

Question: What work is scheduled and underway?

Answer: Work is underway to investigate alternative pipeline routes, which include coordination and negotiation with the National Park Service. Data collection for an environmental assessment for the National Environmental Policy Act compliance has been initiated, and a preliminary cost estimate for the pipeline pumping plant and treatment plant will be completed this summer.

GUERNSEY DAM, NORTH PLATTE PROJECT, WYOMING-NEBRASKA

Question: In fiscal year 1983 this committee approved funding of the Guernsey Dam Modification under the Safety of Dams Program.

What is the current status of this work?

Answer: A construction contract to accomplish the work was awarded in July 1983. Work involving modification of the north spillway is about 50 percent complete and is to be completed by this spring. The spillway will then be capable of safely passing the inflow design flood without structural failure and subsequent catastrophe downstream.

COLORADO RIVER FRONT WORK AND LEVEE SYSTEM, ARIZONA-CALIFORNIA-NEVADA

Question: What damage resulted from the 1983 high flows of the Colorado River to Colorado River Front Work and Levee System facilities?

Answer: Damages to river regulation and control facilities were generally confined to areas within the levee system.

The cost of repairs and replacement of facilities is estimated at about \$41 million based upon an early assessment of the damages. This estimate was prepared during the period when many of these facilities were inundated by the high flows.

Weather conditions have necessitated continuation of high flow releases into fiscal year 1984.

When actual damages are determined as the high flows are reduced, a revised estimate will be prepared. Repairs and replacement of facilities are scheduled over a period of 4 years.

YUMA QUARTERMASTER DEPOT, COLORADO RIVER FRONT WORK AND LEVEE SYSTEM, ARIZONA-CALIFORNIA-NEVADA

Question: Funding in the amount of \$1,500,000 was written into the fiscal year 1984 Supplemental Appropriations Act for the relocation of the Yuma County Water Users Association from the Quartermaster Depot at Yuma, Arizona. What progress has been made?

Answer: Reclamation is preparing a contract to provide for construction of a new project headquarters facility by the Association. The contract is scheduled for execution in April 1984, and construction should start at that time. The Association is scheduled to vacate the Quartermaster

Depot shortly after completion of the facilities, now scheduled for late fiscal year 1984.

Leadville Mine Drainage Tunnel Project, Colorado

Question: Your fiscal year 1985 request includes \$200,000 for the Leadville Mine Drainage Tunnel. What do you plan to accomplish if these funds are appropriated?

Answer: The EPA is currently conducting a feasibility study of pollution problems in California Gulch, a tributary of the Arkansas River, located approximately 5.5 miles downstream from the Leadville Drain outfall. The EPA study is being funded by the "Superfund". Several of the alternatives being evaluated in the feasibility study would incorporate treatment of the Leadville Drain discharge into the program. Since the Leadville Drain is a Federal facility, it is not eligible for "Superfund" funds for any activities related to its pollution abatement program. Such activities would include planning, design, and construction. We have an informal agreement with the EPA to participate in the latter aspect of their study. As we now see it, our participation will consist of providing engineering and other technical support using carryover funds for fiscal year 1984.

The EPA study is scheduled for completion in the middle of fiscal year 1985. The study will contain a plan to remedy the existing heavy metals pollution problem in the Upper Arkansas River Basin, including that originating in the Leadville Drain. The fiscal year 1985 funds will be needed to further refine the EPA plan as it relates to the Leadville Drain in order to obtain authorization and additional appropriations to implement their plan. This will involve developing preliminary designs and cost estimates for submittal to Congress for authorization and funding. A report supporting such legislation will also be required.

Palmetto Bend Project, Texas

Question: Briefly describe the lawsuit which was recently filed regarding oil and gas leasing at the Palmetto Bend Project.

Answer: The Lavaca-Navidad River Authority has filed a lawsuit alleging that the department of the Interior illegally granted noncompetitive oil and gas leases for \$1 an acre on approximately 8,200 acres of Federal land at the Palmetto Bend Project. The Authority claims it stands to lose "millions of dollars" by not having had the leases issued through competitive bidding.

GRIFFITH WATER PROJECT, FIRST STAGE, NEVADA

Question: What is the status of replacement of existing casings at the Stage I pumping plants 1A and 2A on the Robert B. Griffith Water Projects?

Answer: Replacement of the pump casings is awaiting approval of pending legislation and funding. This legislation has been passed by the Senate in S. 918 and has been introduced in the House in H.R. 2146. No funds have been requested in fiscal year 1985.

GRIFFITH WATER PROJECT, SECOND STAGE, NEVADA

Question: I understand that there is a problem with the alinement of the First Stage Griffith Water Project laterals. Will you please describe the problem and the corrective measures that are being taken?

Answer: At least one segment of the First Stage laterals is located outside the recorded easements, resulting in a sizeable damage claim from one of the landowners involved. As a result, a resurvey of all the laterals has been undertaken, the results will be analyzed, and corrective measures will then be determined. The State of Nevada concurs in the importance of protecting the laterals from further external encroachment, and has agreed that any cost incurred to correct the problem will become part of the Second Stage repayment obligation.

WASHITA BASIN PROJECT, OKLAHOMA

Question: What is the current status of the seepage control work at Foss Dam?

Answer: Work has been completed on a pressure relief well system to relieve hydrostatic uplift pressures and prevent potential erosion of foundation material at Foss Dam. In order to complete the protective measures, a deep toe drain must be constructed to augment the relief well system. Construction of the toe drain is scheduled to be started in fiscal year 1985; however, completion of the toe drain is dependent upon nonreimbursable

safety of dams legislation or an amendment to the repayment contract. The Foss Reservoir Master Conservancy District is not receptive to repayment contract negotiations, while it awaits the outcome of pending legislation aimed at amending the Safety of Dams Act. The District expects authorization of nonreimbursable funding for seepage control work at Foss Dam will be included in the amendatory legislation.

SAFETY OF DAMS - APPROPRIATIONS LIMIT

Question: How many more projects could be started under the current \$100 million ceiling of Reclamation Safety of Dams Act 1978?

Answer: Under the current ceiling the Bureau could not start any new safety of dams projects after fiscal year 1985. The total estimated cost of work proposed through the fiscal year 1985 budget and subject to this ceiling, is \$182 million. The obligations through fiscal year 1985 will total \$61 million, of which, \$33 million had been expended as of September 30, 1983. A balance of \$121 million will still be needed to complete this work. Therefore, current ceiling limits completion of much of the work that is currently proposed. Actual corrective work on Jackson Lake Dam and Stewart Mountain Dam could not be initiated as well as corrective work on other dams, not currently included, in future years.

SALT RIVER PROJECT, SAFETY OF DAMS PROGRAM, ARIZONA

Question: If the Safety of Dams Act is not amended to increase the authorization ceiling, what actions will the Bureau undertake to correct the safety deficiencies at the Salt River Project dams?

Answer: Since all the safety deficiencies of the Salt River Project dams are interrelated and correcting one without correcting the others would accomplish little, corrective action cannot be undertaken within the current appropriation ceiling provided by the Safety of Dams Act. The Salt River Project is studying the feasibility of interim methods that might provide some degree of limited

protection. We are also studying the potential for accomplishing some work through non-Federal participation.

Question: Is sufficient authority available to solve the Safety of Dams problems on the Salt River Project dams?

Answer: No. The Safety of Dams Act only authorizes \$100 million to correct safety problems on Reclamation dams. The recommended solution on the Salt River Project dams alone is estimated to require \$270 million which includes the costs allocated to Safety of Dams as a result of the proposed action for the Regulatory Storage Division of the Central Arizona Project and also includes modifications to Horse Mesa, Mormon Flat, and Bartlett Dams.

CENTRAL ARIZONA PROJECT, ARIZONA-CALIFORNIA-NEW MEXICO-NEVADA-UTAH

Question: As of February 1, 1984, what work was accomplished on the Central Arizona Project?

Answer: The project, including the Navajo Project Participation Agreement, is 50 percent complete. Work is complete on the prime contracts for the Havasu, Bouse Hills, Little Harquahala, Hassayampa, and Salt-Gila Pumping Plants; three tunnels and seven siphons of the Granite Reef Aqueduct; Granite Reef Aqueduct Reaches 1 through 12; Salt-Gila Reaches 1A, 2, and 3; Davis-Parker 230-kV Transmission Line, Davis-Parker Switchyards 230-kV Additions, Liberty-Parker 230-kV Transmission Line, ParkerHavasu 230-kV Transmission Line, McCullough-Davis 230-kV Transmission Line, Hassayampa 230-kV Tap Line, Liberty Substation 230-kV Additions; Harcuvar-Bouse Hills and Harcuvar-Little Harquahala 115-kV Transmission Line and Harcuvar Substation and Hassayampa Tap Substations; and McCullough Switching Station. Land acquisition is complete for the Granite Reef and Salt-Gila Aqueducts and Associated Transmission Facilities. Final environmental impact statements have been completed for the overall Central Arizona Project, the Havasu Pumping Plant and Buckskin Mountains Tunnel, Granite Reef Aqueduct, Granite Reef

Aqueduct Transmission System, Tucson Aqueduct - Phase A, and the Water Allocations.

Question: What is the present schedule for delivery of Central Arizona Project water to users in Pima County?

Answer: Our present schedule calls for delivery of Central Arizona Project water to Pima County water users beginning in 1988. Specifically, the Cortaro Marana Irrigation District in 1988; the Avra Valley Irrigation District, Turnout 1 and 2 in 1989, Turnout 3 in 1990; the Papago-Schuk Toak District in 1990; the City of Tucson, San Xavier Reservation, and other water users south of the San Xavier Indian Reservation in 1991.

Question: What is the status of planning for delivering Central Arizona Project water to both Indian and non-Indian water users in Pinal County?

Answer: Central Arizona Project water will be delivered to the primary Pinal County water users through the Santa Rosa Canal. Selection was based on least cost appraisal estimates and the users preferred delivery routes. This system serves the non-Indian irrigation districts of Maricopa-Stanfield and Central Arizona, the Ak-Chin and Papago-Chui Chu Indian Communities, and municipal users of Eloy, Arizona City, and Casa Grande. Construction of this multiple-user system will begin in fiscal year 1985. Planning for delivery to the remaining users is ongoing and will be scheduled as planning is completed on the individual delivery systems.

Question: What is Reclamation's proposed action for the Central Arizona Project's Tucson Aqueduct Phase B?

Answer: The proposed action is an aqueduct route located on the west side of the Tucson Mountains. Proposed action would be an aqueduct with two termini. One terminus would deliver project water to City of Tucson's delivery point and the other would deliver water to the south boundary of the San Xavier Indian Reservation. It

is anticipated that water users with Central Arizona Project allocations south of the Reservation will construct their own conveyance systems to convey the water to the point of use. The proposed action defers a decision on including storage facilities as part of the plan until after the Central Arizona Project has been in operation and the need and desirability of storage as an aqueduct feature has been established.

CENTRAL ARIZONA PROJECT--NON-INDIAN DISTRIBUTION SYSTEM--ARIZONA,
NEW MEXICO

Question: As of February 1, 1984, what work was accomplished on the Central Arizona Project Non-Indian Distribution System?

Answer: Work continued on preconstruction activities and approval of distribution system planning reports. Four irrigation districts have signed water service subcontracts and submitted approved planning reports. Three of these have validated repayment contracts.

Question: What work is scheduled or underway on the Central Arizona Project Non-Indian Distribution System?

Answer: In fiscal year 1984 work will continue on preconstruction activities. Contracts will be awarded for the Harquahala Irrigation District's Link Canal and I-10 Reach of the Westside Canal; Harquahala Valley Road Canal; and the Westside Canal-Centennial Reach. Additional contracts will be awarded as planning reports are approved.

Question: What work is scheduled for fiscal year 1985 on the Central Arizona Project Non-Indian Distribution System?

Answer: In fiscal year 1985, construction will be continued on the Harquahala Valley Irrigation District's Link Canal and I-10 Reach of the Westside Canal; Harquahala Valley Road Canal; and the Westside Canal-Centennial Reach. Contracts will be awarded for the Harquahala Valley Irrigation District's Westside Canal-Eagletail Reach, Westside Laterals, and Eastside Laterals; the Santa Rosa Canal Division A and Division B; New Magma Irrigation and Drainage District's

Laterals A and B and Laterals C and D; and the Chaparral City Distribution System. Other contracts will be awarded as planning reports are approved and repayment contracts are signed and validated.

CENTRAL ARIZONA PROJECT, NON-INDIAN DISTRIBUTION SYSTEM, ARIZONA-NEW MEXICO

Question: What is the status of work on the Maricopa-Stanfield Irrigation and Drainage District distribution system?

Answer: The Maricopa-Stanfield Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project water and a repayment contract for construction of a distribution system on November 21, 1983. The total cost of constructing the distribution system, including allowances for price escalation, is estimated to be \$97,500,000. The district will contribute \$19,500,000 during construction and will repay its \$78,000,000 obligation to the United States over a 26-year period. The distribution system will serve about 89,000 acres in the Maricopa-Stanfield Irrigation and Drainage District. The district's main canal (Santa Rosa) will also carry water to and be cost-shared by the Central Arizona Irrigation and Drainage District, the Ak-Chin and Chui Chu Indian communities, and to several municipal entities. In addition to the 60-mile long Santa Rosa canal, the district's system will consist of several small pumping plants, a 30-mile long canal, and about 125 miles of lateral canals. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and two construction contracts will be awarded. Five construction contracts will be awarded in fiscal year 1986. Construction is expected to be completed in fiscal year 1988.

Question: What is the status on the New Magma Irrigation and Drainage District distribution system?

Answer: The New Magma Irrigation and Drainage District entered into a water service subcontract for delivery of Central Arizona Project

water and a repayment contract for construction of a distribution system, on November 21, 1983. The total cost of constructing the distribution system, including allowances for price escalation, is estimated to be \$21,900,000. The district will contribute \$4,400,000 during construction and will repay its \$17,500,000 obligation to the United States over a 22 year period. The distribution system, which includes approximately 34 miles of lateral canal and 6 miles of pipeline laterals, will serve approximately 26,900 acres in the district. During fiscal year 1985, rights-of-way will be purchased, engineering and geologic investigations will continue, designs and specifications will be prepared, and three construction contracts will be awarded. Construction is expected to be completed in fiscal year 1987.

LOWER COLORADO RIVER 1984 OPERATING PLAN

Question: What are your plans on operating the Colorado River Reservoirs in 1984 to prevent a recurrence of last year's high flows?

Answer: Our 1984 operating plan is to make large releases from the reservoirs through March 1984. This will increase available flood control space to handle an "Upper Quartile" runoff (about 150% of normal) without having to bypass powerplants or make spillway releases at Glen Canyon and Hoover Dams. In developing this plan, we ran numerous computer studies and held several meetings with representatives of the Colorado River Basin States. On December 7, 1983, at a meeting in Las Vegas, the Basin States unanimously supported our recommended operating plan.

Question: How have the current high runoff forecast for 1984 for the Colorado Basin impacted your 1984 operating plan?

Answer: The current forecast for April-July 1984 runoff into Lake Powell is 11.9 million acre-feet (MAF), or 160% of normal. Based on that forecast, we have been releasing an average of 31,000 cubic feet

per second (cfs) from Hoover Dam during January and February. Under our proposed 1984 operating plan we would have released about 24,000 cfs from Hoover during January and February. If the forecast remains at this high level in the coming months, we would expect to make Hoover releases of about 28-29,000 cfs through July. If the forecast decreases then flows would also decrease. Only a very large increase in the forecasts would require releases greater than those made in January and February. Thus, having such an increase, we expect no serious flooding along the lower Colorado River in 1984.

FLOOD PROBLEMS IN NEBRASKA, PUBLIC LAW 98-181

Question: What efforts did the Bureau of Reclamation undertake in 1983 to control flooding along the Platte River in Nebraska?

Answer: The Bureau's Lower Missouri Region in Denver, Colorado, and the Missouri River Division of the Corps of Engineers in Omaha, Nebraska, regularly meet on a 4-6 month basis to review river and reservoir operations. Emphasis is directed to achieving maximized flood control benefits. Working relations between the Bureau and Corps continue to be on an excellent basis with extensive cooperation between their respective offices.

Throughout the high runoff conditions of 1983, the Bureau communicated with the Corps (Corps of Engineers) on an almost daily basis for operation of Bureau reservoirs to alleviate downstream flooding to the greatest extent possible. While in the flood control pool from May 9 through August 15, releases from Glendo Reservoir, on the North Platte River in Wyoming, were directed by the Corps in accordance with the Flood Control Act of 1944. However, Glendo Reservoir is the only facility on the North Platte River with storage space allotted to flood control. No flood control reservoirs are located on the Laramie River in Wyoming nor the South Platte River below Denver, Colorado. Consequently, the control of flood flows of the Platte River in Nebraska is limited.

Question: What actions are planned for the 1984 runoff season?

Answer: A meeting of State and Federal officials and water user organizations was held February 8 to coordinate operations and release schedules for the North Platte River to minimize flood problems. At that meeting, agreement was reached on beginning early reservoir releases in February to create enough space in the reservoir system to handle the forecast runoff. Further meetings will be held monthly to determine if any changes in operation are needed.

Question: What role will the Bureau take in regards to the directive of Public Law 98-181 to the Corps to address flooding in Nebraska?

Answer: The Bureau will coordinate reservoir operations with the Corps and will assist the Corps as appropriate in developing a plan of action to address the flooding problems of Nebraska. In addition, the Bureau will continue to pursue construction of the proposed Narrows Reservoir located near Fort Morgan, Colorado which would provide additional regulation of flows in the South Platte River Basin.

OPERATIONAL EFFECTS ON ABOVE-NORMAL RIVER CONDITIONS - PLATTE RIVER BASIN

Question: What were the effects of Bureau of Reclamation facilities on the above-normal river conditions in the Lower Missouri Region during 1983?

Answer: Inflow to the North Platte River Basin was the second highest in 75 years. A wet/cool late winter followed by rapid warming resulted in reservoir inflows of as much as 250 percent of normal. As a result of operations at Bureau reservoirs, the flows downstream were maintained below the maximum safe channel capacity. These flood control operations prevented a total of \$6,115,000 in damages in the North Platte Basin.

Heavy late season snowfall in the central Rocky Mountains of Colorado followed by rapidly rising temperatures in June and July caused runoff conditions 200-300 percent of normal during July. Bureau facilities in the Colorado River Basin of the Colorado-Big Thompson and Fryingpan-Arkansas Projects were operated to provide flood control to the extent possible.

Without the flood control operation of Bureau reservoirs of the Colorado-Big Thompson Project, the flow through Glenwood Springs, Colorado, would have been 40 percent higher. Operations of the Fryingpan-Arkansas Project facilities in western Colorado reduced the flow through Basalt, Colorado, by nearly 50 percent.—Estimates of the worth of these operations in damages prevented are not available at this time. Pueblo Reservoir on the Arkansas River immediately upstream of Pueblo, Colorado, was operated for several months during 1983 for flood control purposes. As a result of these operations, an estimated \$47,000 in damages were prevented.

During the April-July 1983 period, Bureau facilities in the Republican and Kansas River Basins were operated for flood control purposes. Three of the four facilities did not use flood control space but were credited with benefits through the use of their conservation pools. These were Cedar Bluff, Kriwin, and Wacanda Reservoirs. Lowell Reservoir operated within the flood control pool. Damages prevented were estimated to total \$873,000.

MIDDLE RIO GRANDE PROJECT, NEW MEXICO

Question: What is the status of the low-flow conveyance channel rehabilitation work on the Middle Rio Grande Project?

Answer: Rehabilitation of the low-flow conveyance channel, which is designed to salvage and transport waters through the lower portion of the Middle Rio Grande Valley into Elephant Butte Reservoir, is being accomplished in three

segments. The first segment, which consisted of about seven miles of channel rehabilitation, was completed in 1982. Work on the second segment, which included about 13 miles of channel rehabilitation, was contracted and the work was completed in April 1983. The third segment, which includes about 20 miles of channel rehabilitation, was partially accomplished by Reclamation forces using a hydraulic dredge. However, the remaining 16.5 miles cannot be completed until the waters in Elephant Butte Reservoir recede.

With above normal runoff predicted again this year, it is doubtful that the remaining work in the lower reach can be accomplished in fiscal year 1985. In this event, we plan to utilize the programmed funds to work on the upper reaches of the channel. The upper 35 miles of the low-flow conveyance channel also requires extensive work. This work is scheduled to be accomplished over a 5-year period.

RECLAMATION REFORM ACT OF 1982 - IMPLEMENTATION

Question: Recently, the Department of Interior published final rules to implement the Reclamation Reform Act. When will these rules become effective and what administrative actions are scheduled for fiscal year 1985?

Answer: The final rules on acreage limitation became effective on January 5, 1984. These rules establish criteria and procedures to be applied uniformly to all water user entities subject to Federal Reclamation law. It marks the first time in the Bureau's history that a comprehensive set of guidelines have been developed to administer the acreage limitation program. Currently, Bureau personnel are conducting training sessions to familiarize its employees, water user organizations, and other interested parties with the contents of the final rules. The new rules will be applicable in the 1984 irrigation season.

Currently, we are in the process of implementing the full-cost pricing and certification and reporting requirements of the law, and developing a data base to monitor multi-district landholdings. Reclamation Instructions

will need to be prepared to provide field personnel with consistent policy and technical guidelines to administer the program. In fiscal year 1985, additional funding will be required to undertake other key administrative actions. These include instituting enforcement actions, establishing procedures for audit and compliance checks, conducting appraisals for excess land sales, and preparing land classification and economic studies for class 1 equivalency determinations.

RECLAMATION REFORM ACT OF 1982 - WATER CONSERVATION PROVISIONS

Question: How do you intend to implement the water conservation provisions of section 210 of the Reclamation Reform Act?

Answer: We believe our existing procedures meet most of the requirements of section 210 of the Reclamation Reform Act of 1982. The Bureau developed language for all new and amendatory water service and repayment contracts in 1978. That language was revised in February 1983 to be consistent with the water conservation requirement of the Act. The contractor is required to develop a water conservation plan that includes goals and water conservation measures, which will be reviewed at periodic intervals over the life of the contract.

SMALL RECLAMATION PROJECTS ACT (P.L. 84-984) LOAN CEILING

Question: What effect will the \$600 million appropriation ceiling have on the Small Reclamation Projects Act program?

Answer: The \$600 million ceiling will probably be reached sometime in late 1984. Unless the ceiling is raised all further processing of loan applications will be stopped at or before the ceiling is reached.

Legislation has been introduced in the Congress that would raise the present \$600 million appropriation ceiling by an additional \$600 million. This legislation is contained in S. 981 introduced October 20, 1983 by Senator McClure and is currently in the Senate Committee on Energy and Natural

Resources and H.R. 4444 introduced by Representative Kazen November 17, 1983 and is currently in the House Committee on Interior and Insular Affairs.

LOAN PROGRAM BACKLOG

Question: On page 490 you indicate you will complete 5 loan projects and continue work on 9 others in fiscal year 1985. What is your backlog of pending loan applications?

Answer: I will submit a list of 7 pending loan applications for the record. In addition, there are 4 approved but unfunded loans. (The information follows:)

PENDING LOAN APPLICATIONS

Public Law 84-984	Title of Loan	Total Estimated (cost in \$ millions)
1.	Gila River Farm No. 2, Arizona	\$21.4
2.	Hidalgo County No. 1, Texas (Supplemental Loan)	12.4
3.	Santa Clara Valley Water District, California	20.9
4.	Amity Mutual Irrigation Company, Colorado	4.0
5.	Ak-Chin Indian Community (West), Arizona	13.1
6.	United Water Conservation District, California	18.7
7.	Bitter Root Irrigation District, Montana	1.7
8.	San Bernardino County Water Conservation District, California	23.9
Total		\$116.1

FINANCIAL RESPONSIBILITIES OF GENERAL ADMINISTRATIVE EXPENSES

Question: What are the financial responsibilities of the General Administrative Expenses appropriation?

Answer: The General Administrative Expenses (GAE) appropriation finances the managerial responsibilities of the Reclamation program. According to a General Accounting Office report on overhead and administrative costs and pursuant to annual appropriation language these costs are nonreimbursable in nature and should not be charged to other appropriations.

Nonreimbursable administrative costs are identified as comprising the personnel requirement for providing the central management functions of the Reclamation program and the necessary overhead expenses associated with the direct program personnel requirement.

Equipment costs include those new and replacement items needed to provide centralized support for ADP applications and laboratory testing. In addition, capital improvements to Bureau facilities, and contractual services such as computer software development and maintenance are funded under GAE.

GENERAL ADMINISTRATIVE EXPENSES

Question: Please explain why the General Administrative Expenses

Appropriation increased from \$53,750,000 in 1984 to \$58,917,000 for 1985.

Answer: A \$5,167,000 increase is requested for fiscal year 1985. The increase covers (1) \$347,000 needed for increased cost of office space, materials and supplies; (2) \$2.2 million for procurement of major acquisitions and updating technical publications; (3) \$1,850,000 for increased costs of contractual services and ADP user charges, and (4) \$1,120,000 for legislative pay raises. The request also includes a one-time reduction of \$350,000 for the fiscal year 1984 grant in support of the 12th International Congress on Irrigation and Drainage.

GENERAL ADMINISTRATIVE EXPENSES - INCREASE IN PERSONNEL

Question: Why has the number of permanent positions increased for the General Administrative Expenses appropriation while Operation and Maintenance and General Investigations show a decrease?

Answer: The President's fiscal 1985 request for the GAE program reflects an increase of six permanent positions over the fiscal year 1984 program. These positions are associated with the new Division of Power which was created upon reorganization of the office of the Assistant Commissioner for Planning and Operations. However, the full-time equivalent (FTE) of the GAE program reflects an overall decrease of nine FTE from 1984 to 1985.

Question: If the overall FTE level for the GAE program decreased, what is the reason for a 17 FTE increase for the Washington Office?

Answer: The creation of the Division of Power will result in a transfer of up to six FTE positions to Washington from other offices. In addition, the Washington Office ADP staff is being expanded to handle increased workload from decentralization of activities. Additional needs are also anticipated in the Commissioner's office.

QUESTIONS SUBMITTED BY SENATOR DeCONCINI

Headgate Rock Dam

Question: Could you provide for the record the current status of funding for construction activities on Headgate Rock Dam? Have any funds been allocated for construction, and how much is included in the FY 1985 budget for this project?

Answer: No construction funds have been allotted to date. Reclamation has done \$1,287,000 of design work on the powerplant for the Bureau of Indian Affairs, and was reimbursed in 1980. In FY 1984, we submitted authorizing legislation to transfer available construction funds to the project, and in FY 1985 the budget request is \$9,100,000.

Colorado River Indian Reservation - Parker Area

Question: I wonder if you could clarify for the record whether or not any studies have been undertaken on potential watertable problems on the Colorado River Indian Reservation near Parker, Arizona?

Answer: A number of studies have taken place on the Colorado River Indian Reservation in the past few years by the Bureau of Reclamation. However, none of those studies have been specifically directed toward ground water level problems or to any drainage problems in the area. Reclamation studies in the area have been confined to the specific purposes of determining potentials for salinity control benefits or to determine the amount of unmeasured ground water returning to the river.

Question: If studies have been completed, were any recommendations made concerning drainage wells and pumps?

Answer: No. The studies by Reclamation did not specifically address watertable problems and there were no recommendations made concerning wells and pumps.

Question: If a study has not been conducted, is a feasibility study necessary to alleviate watertable problems or could wells and pumps be installed without a study? If a feasibility study is necessary, how much money would be needed in FY 1985 to complete a study?

Answer: We have not been requested to do any studies relating to the watertable problem, but before pumps and wells could be installed, a study would be required to determine need and then location and sizing. We do not have an estimate of cost for this study.

Question: If a feasibility study is not necessary, how much money would be needed in FY 1985 to install wells and pumps? If such wells were installed, would these activities be accomplished by the Bureau of Reclamation or the Bureau of Indian Affairs?

Answer: See answer above. Either agency could accomplish the work after a plan is developed and necessary funding provided.

Question: Have funds been requested for such a project in FY 85 or, are you considering a supplemental request? If so, for how much?

Answer: We have not requested funds nor are we aware of any request for funds by others for this purpose.

Yuma Desalinization Project

Question: Could you provide the committee with an update on the current status of the proposed Yuma Desalinization Plant?

Answer: At present, the completion date of the plant has been delayed two years as a result of budget constraints in fiscal years 1983 and 1984. On the present schedule, the desalinization plant is anticipated to be completed by fiscal year 1989. If high volume runoff along the Colorado River does not materialize, the delay could necessitate additional upstream releases to meet treaty requirements with the Republic of Mexico.

Funds for the desalinization plant were first appropriated during fiscal year 1975. A lawsuit was filed by Fluid Systems, a division of Union Oil Products Inc. based upon whether the current plan to install an initial capacity of 73 million gallons per day (Mgal/d) should be increased to 96 Mgal/d as specified in the Environmental Impact Statement. Current hydrologic studies by the Bureau of Reclamation indicate that the initial installed capacity of 73 Mgal/d would be more than adequate to meet existing and projected needs for water quality. By mutual agreement of the Bureau and Fluid Systems this legal action was resolved by stipulation approved by the United States District Court in Phoenix, Arizona, on February 27, 1984.

Yuma Quartermaster Depot

Question: The Supplemental Appropriations bill for FY 1984 included a provision directing the Bureau to relocate the Yuma Water Users' Association from its quarters at the Yuma Quartermaster Depot to a more suitable location. I wonder if you could provide me with a status report on the move and a timetable for completion.

Answer: The Bureau of Reclamation is currently preparing a contract which will provide for the construction of a new project headquarters facility. We anticipate that this contract will be executed during April 1984, and that construction will commence immediately thereafter. On our present schedule, we anticipate completion of the new headquarters facility by late fiscal year 1984. The Water Users Association has indicated a desire to vacate the Quartermaster Depot as soon as their facilities can be completed.

YUMA WELLS

Question: The Energy and Water Appropriations bill for FY 84 included language in its Senate report urging the Bureau to undertake a study on groundwater problems in the Yuma area and the possible installation of wells. Could you provide the current status of this study?

Answer: In August 1983 a Ground Water Task Force was formed by the Arizona Department of Water Resources. This task force, which included the Bureau of Reclamation, completed a report in September 1983 recommending a series of 40 drainage wells to alleviate the high ground water problems in the Yuma area. The Federal Emergency Management Agency (FEMA) agreed to share the costs of installing four wells in Yuma County as part of their flood mitigation program. Reclamation initially agreed to fund the installation of four wells, two in Arizona and two in California. Following further discussion with State and County officials we are proceeding with plans to install four more wells in Arizona. That makes a total of 12 wells planned for installation.

The current status of the well installation is as follows: of the four FEMA wells, one is completed and ready to start pumping, the other three will be completed by mid-March; of the four initial Bureau wells, one has been drilled but not yet tested, one is being drilled, and the two in California will be started soon, with all four of these to be operational by mid-March also. The remaining four Bureau wells do not at this time have a scheduled completion date.

The California Department of Water Resources has initiated a study of ground water conditions in the Yuma area on the California side of the river. We are providing the Department with data and other input for their study.

Once the drainage wells in the Yuma area begin to pump, we will be working with the task force to monitor the effects of that pumping on the ground water levels to determine if more wells or further studies are needed or if the presently planned 12 wells will be sufficient to alleviate the problem.

Central Arizona Project

Question: What is the Bureau's anticipated date of water delivery to the Phoenix metropolitan area from the CAP? Could you please provide a list of the sequence of events between now and the time water is delivered to Phoenix on a permanent basis?

Answer: The Bureau plans to deliver water to the Phoenix metropolitan area by late 1985 after testing is completed on the delivery systems. We will provide for the record a list of the events which remain to be accomplished before water delivery.

MILESTONES FOR COMPLETION

<u>Work Item</u>	<u>Estimated Date of Completion</u>
Pumps:	
Complete installation	12/84
Start Testing	9/84
Electric Auxiliary Systems:	
Complete installation	6/84
Start Testing	6/84
Main aqueducts:	
Complete installation of power and control cables	4/85
Complete installation of check structures	8/84
Complete turnouts	3/85

Question: In addition, what is the Bureau's projected timetable for water delivery to irrigation districts in Arizona and the present status of each?

Answer: Water is scheduled to be available through the Granite Reef Aqueduct to the Phoenix metropolitan area in 1985, to users along the Salt-Gila Aqueduct and in Pinal County in 1986. Water deliveries to northern Pima County and the Tucson area are scheduled for 1989 and late 1991, respectively.

On the Granite Reef Aqueduct, contracts have been executed with five Indian communities for delivery of CAP water. Water service subcontracts have been offered to all non-Indian agricultural water users except those having land eligibility or upstream water exchange problems. These problems are expected to be resolved within the next few months. Subcontracts are

scheduled to be offered to municipal and industrial users in April 1984. A water service subcontract and a distribution system repayment contract have been executed with one non-Indian agricultural user. Water service subcontracts are scheduled to be executed with five non-Indian agricultural users in FY 1984. Remaining water service subcontracts are scheduled to be executed in FY 1985. Construction of the non-Indian systems is scheduled to begin in FY 1984 and to be essentially complete by 1986.

On the Salt-Gila Aqueduct, a contract has been executed with one Indian community and contract negotiations are underway with the last of the Indian water users for delivery of CAP water. Water service subcontracts have been offered to all non-Indian agricultural water users and are scheduled to be offered to municipal and industrial users in April 1984. Two water service subcontracts and one distribution system repayment contract have been executed with non-Indian agricultural users. Water service subcontracts are scheduled to be executed with the remaining non-Indian agricultural and municipal and industrial users before the end of FY 1984. Construction is scheduled to begin in FY 1985 and completed by 1988.

On the Tucson Aqueduct, contracts have been executed with three Indian communities for delivery of CAP water. Water service subcontracts have been offered to all non-Indian agricultural users and will be offered to municipal and industrial users in April 1984. Water service subcontracts and distribution system repayment contracts have been executed with two non-Indian agricultural users. Remaining water service subcontracts are scheduled to be executed before the end of FY 1984. Construction is scheduled to begin in FY 1985 and completed by 1991.

In summation, actual delivery of water will be controlled by completion of the individual distribution systems. Since construction of the non-Indian distribution systems is being accomplished by the individual districts, the water delivery date is largely under their control. In most cases, the present schedule for completion of the distribution systems coincides with or precedes water availability from the respective aqueduct.

Question: A year ago, the Members of the Arizona delegation received estimates for CAP from the Bureau which totaled \$252 million, including \$104.9 million for Tucson Phase A and B. Could you detail for the Committee why those costs were anticipated a year ago and why FY 85's request is one-half the estimates of one year ago?

Answer: The schedule used by the Bureau about one year ago for the Central Arizona Project projected capability and funding at the optimum level and was based on estimated total costs of \$270 million for construction of Tucson Aqueduct Phase A and \$470 million for Phase B. However, during the year, the estimated total cost of the Tucson Division was reduced from that furnished to you last year. The revised estimate total cost for construction of Phase A is now \$214 million while that for Phase B is now \$241 million. These reductions occurred as a result of realignment and major design changes on the Tucson Aqueduct system. The realignment was prompted by a desire to minimize impact on developed and wildlife refuge areas, and to reduce project cost by building facilities on a greater portion of State and Federal land. This schedule included late FY 1983 award of contracts on Phase A for construction of one pumping plant structure and furnishing pumping units for three pumping plants. The schedule also provided for right-of-way acquisition and a construction start on Phase B in FY 1985. Continued funding of these contracts and award of additional contracts in FY 1985 established the level of \$104.9 for construction of Tucson Division Phases A and B in FY 1985.

Tucson Division funding requirements for FY 1985 have been reduced from \$104.9 million to \$51.7 million due to the delay in award of the pumping plant and pump unit contracts on Phase A to FY 1984, and due to reduced right-of-way needs for Phase B. Additional designs were necessary to accommodate unsatisfactory pumping plant foundation conditions and resulting changes in design of the discharge lines. Right-of-way acquisition costs were significantly reduced in FY 1985 due to a change in alignment that has now located the aqueduct primarily on Federal land. Neither the delays just described, nor the reduced FY 1985 budget request will result in delaying the schedule for delivery of water to Tucson in 1991.

Question: What is the Bureau's projected completion date for the draft and final EIS's for the Tucson Aqueduct, Phase B?

Answer: The projected completion date for the draft EIS is November 1984 and for the final EIS it is August 1985.

Question: What is the earliest date construction activities could begin on Phase B and when would you anticipate requesting construction funds for the Tucson Aqueduct, Phase B?

Answer: We plan to begin construction on the first reach of Phase B in the second quarter of fiscal year 1986. A request for funds on Phase B is expected to be made in the fiscal year 1986 Budget Justifications.

Question: Approximately one year ago, the Bureau predicted an estimated \$10 million could possibly be spent for Phase B in FY 1985. What was that estimate based on and why is that no longer possible?

Answer: The FY 1985 estimate of one year ago for the Tucson Division Phase B was developed on the basis of projected capability and funding at the optimum level. Relocating the Phase B aqueduct alignment to take advantage of available Federal lands has reduced our FY 1985 capability by about \$5 million.

Central Arizona Project -- Plan #6

Question: What is the current status of the EIS on Plan #6? What steps are necessary for final approval of Plan No. 6?

Answer: The final EIS for Regulatory Storage, Central Arizona Project, was filed with the Environmental Protection Agency on February 10, 1984. The 30-day mandatory wait period on the final EIS will be over on March 27, 1984. At that time, the Secretary can make a decision concerning implementation on any of the alternatives discussed in the EIS.

Question: Could you identify the funds specifically earmarked for preconstruction activities on Plan #6 in FY 85 and list the elements of that plan?

Answer: The Regulatory Storage Division, a feature of the Central Arizona Project (CAP), is being investigated under the Central Arizona Water Control Study (CAWCS), which was initiated in July 1978. Under that study, six alternative plans were analyzed in detail and Plan #6 was selected as the agency proposed action for CAWCS because the plan best meets project objectives. The Plan #6 proposal provides for construction of the following items:

New Waddell Dam would be developed for regulatory storage, flood control, and recreation. This dam would be located on the Aqua Fria River, immediately downstream of the existing Waddell Dam. A 4.7 mile long reversible canal would connect New Waddell Reservoir with the CAP Aqueduct. Colorado River water would flow through this canal and be pumped into the reservoir for storage. The water would be released back into the canal for distribution to CAP users during periods of peak demand. Cliff Dam and modified Roosevelt Dam would be constructed for flood control, additional water conservation, recreation, and dam safety. Cliff Dam would be located on the Verde River between Bartlett and Horseshoe Dams. The existing Theodore Roosevelt Dam, located on the Salt River, would be modified. Stewart Mountain Dam, also located on the Salt River, would be modified as part of the plan to ensure its safety. Total cost of all features is approximately \$1 billion, and will increase the CAP water supply by 137,600 acre-feet annually.

Funds totaling \$7,208,000 have been requested in Reclamation's fiscal year 1985 budget for preconstruction activities.

Dam Safety

Question: I commend the President and the Secretary for their recent policy statement on cost-sharing for dam safety work. For the record, could you please restate that policy as it relates to upfront cost-sharing for safety repairs on Federal dams.

Answer: President Reagan stated his policy on cost sharing for safety repairs on Federal dams in his January 24, 1984, letter to Senator Paul Laxalt as follows:

"Safety problems at Federal dams should be corrected as expeditiously as possible. The cost of safety work should be borne by the Federal Government. However, if additional economic benefit results from the modification, appropriate cost sharing among the beneficiaries shall be allocated by the appropriate Secretary. Criteria to determine dam safety designation shall be developed by an interagency technical team in consultation with non-Federal parties."

Question: It is my understanding that the President does not support cost-sharing for dam repairs or modifications unless the project results in additional benefits. Could you explain what these additional benefits could be and in what cases fiscal participation by the beneficiaries should be required.

Answer: An interagency technical team is being created to develop criteria by which any benefits would be determined. That team should be appointed soon.

Colorado River Flooding

Question: It is my conclusion that the Bureau did a commendable job responding to the Arizona Delegation during the floods along the Colorado River and in dealing with the concerns of the people of Arizona due to the floods. Do you anticipate any serious flooding problems along the River this spring and what recommendations do you have in dealing with this situation this year and in future years?

Answer: Based on current runoff forecasts and reservoir levels, we anticipate no serious flooding problems along the Colorado River this year. The January 1, 1984, forecast for April-July runoff into Lake Powell was for 13.0 million acre-feet (maf). By mid-February the forecast had declined to 11.9 maf as January and early February precipitation levels were below normal in the Colorado River Basin. Those forecasts are considerably above the average spring runoff of 7.46 maf, and thus we have been making large releases from the Colorado River reservoirs since early January in order to provide adequate storage space to handle the anticipated runoff. Glen Canyon Dam releases have been 25,000 cubic feet per second (cfs), Hoover and Davis Dam releases 31,000 cfs, and Parker Dam releases 30,000 cfs. While those are high releases, no serious flooding occurs at those flows.

If the runoff forecast holds at the present level or decreases in the coming months, releases from the reservoirs will be reduced. If the forecast should increase, then we would have to hold releases at current levels for another month or longer. Only if the forecast increased substantially from its present 160% of normal would there be any likelihood of an increase in current flow levels along the lower Colorado River.

We are using our computer model of the Colorado River to study various operating alternatives for future years to determine if we can provide increased flood control storage space in the reservoir system without adversely impacting water supply and power generation functions. Those studies are being conducted in consultation with representatives of the Colorado Basin

States, and we expect that the results of those studies will aid us in the formulation of our operating plan for 1985 and future years.

Coolidge Dam

Question: As you are no doubt aware, the condition of this BIA Dam is in a bad state of disrepair. I am wondering if you could comment on whether or not this Dam could qualify for assistance under the Bureau's dam safety program. Additionally, could funds be transferred under the authority of the Snyder Act for this work?

Answer: The Reclamation Safety of Dams Act of 1978 authorized the Secretary to perform modifications on Bureau of Reclamation dams as he determines to be reasonably required. Coolidge Dam is the responsibility of the Bureau of Indian Affairs (BIA) and, therefore, does not qualify under this Act. However, Coolidge Dam has received limited funding from the BIA in the past two years.

At the request of BIA, Reclamation performed a safety evaluation of Coolidge Dam. With funding provided by BIA, Reclamation is preparing specifications design for rehabilitation of the penstocks, and is currently performing structural analysis and preliminary designs for more extensive corrective action. Reclamation and BIA agree on emergency repairs needed for the Dam.

Question: The House Reclamation Safety of Dams legislation includes authorization for Coolidge Dam. If approved, when could funds for necessary repairs be made available under the Reclamation Safety of Dams program for this project?

Answer: If an amendment were enacted to provide for provisions to modify the dam, then funds could be made available as soon as Congress appropriates them. It should be noted that a dam safety modification report is being prepared and is scheduled to be completed about October 1985. Plans for corrective action are underway and funds can be requested as necessary under the authority of the Snyder Act, which is the general authority for the Secretary to expend appropriated funds for the benefit of Indian Tribes.

Question: Further, it is my understanding that generators for electrical power generation need to be replaced. What specifically needs to be done with the generators? Which agency is responsible, how much is necessary, and what is the process necessary to get this project underway, i.e., is a study and design required or can the project move straight to construction? What, if any, authorization does the Bureau need?

Answer: The generating units at Coolidge Dam were installed in 1929, and are rapidly deteriorating and in need of replacement. This generally requires replacement of the stator windings, exciter, voltage regulator and other ancillary equipment. Depending on the actual conditions inside the machine, it may be necessary to replace or reinsulate the field windings. The BIA is the responsible agency for initiating this work. Presently, the Bureau of Reclamation is preparing designs and specifications for rehabilitation work on the penstocks and switchyard at Coolidge Dam by agreement with the BIA. A similar arrangement could be entered into to accommodate rehabilitation of the powerplant. Reclamation and BIA are currently working on the specific items that must be accomplished to rehabilitate the powerplant. Authority to do the work is contained in the Snyder Act.

QUESTIONS SUBMITTED BY SENATOR MCCLURE

Twin Falls Canal

Question: My questions concern the potential common use of the Twin Falls canal by the Twin Falls Canal Company and the Salmon Falls Division Project, in Idaho:

The Congress provided funds and authority in FY84 for the Department of Interior to initiate a rehabilitation and betterment program on the Twin Falls Canal Company (TFCC) of Twin Falls, Idaho. The TFCC has completed the master plan and will formally submit a rehabilitation and betterment loan application this spring. Mr. Secretary, you are no doubt aware that there is the possibility of a cooperative effort which would allow the joint use of about 25 miles of the Twin Falls canal to facilitate the conveyance of water by the Bureau of Reclamation for the Salmon Falls Division in Twin Falls county (which project was authorized by Congress in 1972).

We understand that the possible joint venture could save substantial dollars in the cost of the Salmon Falls Division Project, and that such a venture would be a great opportunity to implement the President's stated policy of Federal-State partnerships to "resume water development."

With respect to the possible joint venture, would you provide the committee with the following information:

- (1) The Department's position.
- (2) The principal Bureau people who are responsible for these activities.
- (3) What has been accomplished to date.
- (4) Future plans
- (5) Estimated schedule for completion.
- (6) Estimated cost and dollars saved.

Answer: The following responses are submitted in the order requested:

(1) The Department of the Interior has a deep commitment to the President's policy for water development in your part of the country. You can be assured of our support for the cooperative effort between the Twin Falls Canal Company program and development of the Salmon Falls Division if that joint effort proves to be justified from engineering, economic, and environmental standpoints.

(2) Initial planning efforts for Salmon Falls Division and administration of the R&B program are handled in our regional office, Boise, Idaho. Policy review of these efforts is the responsibility of our Washington office.

(3) Only conceptual planning has been initiated. More definitive planning is needed and since the Bureau's planning funds have been exhausted for the Salmon Falls Division, \$100,000 could be utilized in FY 85 for this work.

(4) The Bureau will be working with TFCC to secure a commitment for the water supply, process the R&B report, determine cost sharing potential, and contract with the landowners in the Salmon Falls area to confirm their current willingness to participate in this possible joint effort.

(5) Construction of the R&B work would require 5 to 6 years once the repayment contract is executed. A schedule has not been determined for the Salmon Falls Division under the proposed joint venture. Additional engineering and plans must be developed.

(6) The total cost is to be developed from future engineering and studies. Earlier feasibility work indicates substantial savings would be possible by using the Twin Falls Canal to convey water to the Salmon Falls Division in lieu of constructing a new separate canal.

RIVER BASIN COMMISSION STATEMENTS AND JUSTIFICATION

Senator ABDNOR. Before we conclude, I also want to make part of the hearing record the justification material and prepared statements of the Susquehanna and Delaware River Basin Commissions and the Interstate Commission on the Potomac River Basin.

[The information follows:]

STATEMENT OF WARNER M. DEPUY, U.S. COMMISSIONER, SUSQUEHANNA RIVER
BASIN COMMISSION

Mr. Chairman and Members of the Committee:

Again, it is a pleasure to appear before you. I do this in a dual capacity, in support of the appropriation request for salaries and expenses for the Office of the United States Commissioner and also for the Federal Contribution to the Susquehanna River Basin Commission.

This Federal-Interstate Compact Commission was established pursuant to Public Law 91-575 among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The Compact serves as the vehicle to produce the most efficient service in the public interest in the conservation, utilization, development, management and control of the water resources of the Basin.

The Commission's membership consists of the Governors of the signatory states, or their appointed designees, and a Federal Member appointed by the President to represent all Federal Agencies. Historically, the Federal Member has been the Secretary of the Interior. In addition, each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member with identical powers of the Member, including the power to vote in the absence of the Member. The non-Federal staff of the Commission receives direction from the Members of the Commission through their alternates.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resource development programs for the Susquehanna River Basin. To accomplish this, the Member and the Commissioner must work closely with all interested Federal Departments and Agencies, serving as coordinators to assure that Federal interests are fully informed regarding all water resources development programs for the Susquehanna River Basin. They also represent Federal interests in all actions by the Commission relating to the comprehensive plan and the advisability of individual water resource policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

An appropriation of \$167,000 for fiscal year 1985 is requested to finance salaries and expenses necessary to enable the United States Commissioner to carry out his responsibilities to protect the Federal Government's interests in the Susquehanna River Basin. This is a \$24,000 decrease from the level appropriated by the Congress for fiscal year 1984.

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

A request of \$230,000 is to provide for the Federal Government's share of the \$1,465,300 current expense budget of the Commission, and is the same amount as appropriated for fiscal year 1984. The current expense budget covers expenses of the staff and the regular operating programs of the Commission.

Mr. Bielo, the Executive Director of the Commission, is accompanying me today and has submitted a statement to the Committee which briefly outlines some of our achievements. We will be happy to answer any questions you have regarding the Commission's current activities and new program initiatives proposed for fiscal year 1985.

STATEMENT OF ROBERT J. BIELO, EXECUTIVE DIRECTOR, SUSQUEHANNA RIVER
BASIN COMMISSION

Mr. Chairman and Members of the Committee:

I look forward each year to the opportunity to appear before your Committee, on behalf of the Commission, to report on our programs, to outline water resources concerns in the Susquehanna River Basin, and to request your support for the proposed Federal share of the Commission's fiscal year 1985 operating budget.

The Susquehanna is a large river that responds quickly to unusual amounts of precipitation. Either high or low precipitation events trigger problems that on the high end of the scale mean flooding and on the low end lead to water supply deficiencies.

Flooding events of significant magnitude plague our Basin on almost a yearly basis leaving behind \$40,000,000 plus in annual damages. Past investments of the Federal and State governments in flood control and protection measures have helped enormously to reduce flood damages. Three current Federal projects -- Lock Haven, Harrisburg, and Wyoming Valley -- are moving toward construction, and, hopefully, will continue to receive your support. Whether or not the non-Federal share of project costs, as now proposed, can be met is a matter of considerable concern at the State and local government level.

Beyond these three projects there is little possibility that any of the remaining 1,100 flood prone municipalities in the Basin can be provided structural flood protection under existing Federal programs.

In recognition of the impossibility of providing protection for all flood prone areas, the Commission has, since 1972, devoted considerable effort toward development of a comprehensive nonstructural flood damage reduction program. Features of this program range from broad basinwide activities such as an interagency evaluation of the National Weather Service Flood Forecast and Warning System, installation of satellite data collection platforms, and flood stage mapping to very localized self-help programs to reduce damages.

Currently we have over 70 self-help flood warning systems operating in the Basin. These systems serve over one million people in flood prone communities. Our current budget anticipates updating our 1976 evaluation of the National Weather Service Flood Warning and Forecasting System.

Major objectives of this effort will be to achieve, within the National system, increased warning time and improved forecast accuracy as these issues continue to be of high concern to industry and community leaders.

The broad topics of water supply and supply system management are afforded increased emphasis in our fiscal year 1985 budget. A framework water supply plan for the Basin is being developed. The plan is designed to address technical, institutional and social/economic aspects of water resources protection and management. On the technical side, surface and groundwater quantity and quality relationships and water supply availability versus demand will be determined.

The technical data will be analyzed and various water use scenarios will be developed in terms of environmental, economic and institutional constraints. After public review of these findings, we will then move toward recommendations related to problem resolution and long-range management of the Basin's water resources.

In another program, the Commission is acting to sponsor development of water supply storage in Cowanesque Reservoir, a Federal flood control/recreation project in Pennsylvania. The need for the water supply storage this project can provide exists now. The President's fiscal year 1985 budget request includes funding for the Army Corps of Engineers to initiate the necessary design work for the project. Hopefully your Committee will look with favor upon this request.

Recently completed groundwater studies, supported by your Committee under a special appropriation, will be refined and used as a basis for development of specific groundwater protection and management recommendations. As an example, within the Susquehanna Basin 300-400 public water supply systems are wholly dependent on groundwater. Many more systems utilize groundwater sources to supplement surface supplies. Protection of these existing public groundwater supplies from contamination, due to conflicting land uses, is of paramount importance in maintaining high quality drinking water. In most instances the recharge areas for public groundwater supplies are neither defined nor appreciated in terms of their vulnerability to contamination.

Our long-range program in this area is designed to define the inferred recharge areas of aquifers serving public water supply systems and to develop site specific protection recommendations for implementation by local governments. Thus while the Commission's water supply study program is progressing on many fronts, the overall water supply study needs of the Basin are considerable. The area involved is quite large and diverse in physical character, and is comprised of old communities wherein the problems are of long standing and are grounded in water use philosophies of the past. The program, due to the magnitude of the study needs, might be more appropriately undertaken as a joint mission in cooperation with the Corps of Engineers or other Federal Agencies to take advantage of "in place" technical expertise.

By now it is rather common knowledge that the Susquehanna River contributes a large part of the total nutrient load that enters the Chesapeake Bay. I hasten to point out that the Susquehanna River is by far the largest contributor of fresh water to the Bay, and, therefore, heads the list for nutrient loading by sheer volume, but not by actual concentration of nutrients in its waters.

The Commission has moved promptly to provide its services to coordinate state and local nutrient reduction efforts and has laid the groundwork for two programs -- monitoring major tributaries and refinement of the Environmental Protection Agency's Bay Study findings -- to enable more accurate targeting of nutrient reduction efforts.

These program highlights touch on just a few of the Commission's activities in the overall area of water resource development, protection and management.

In summary, I would note that the Commission's primary efforts have been directed toward achieving the purposes set forth in the Compact by the Congress and the State Legislatures. In essence, the Congress and the States have charged the Commission with the responsibility to bring about

effective and economical conservation, utilization, development, protection, management and control of the water resources of the Susquehanna Basin. Through various intergovernmental arrangements and its own direct programs, the Commission is achieving these broad purposes. As might be assumed, much of the Commission's work involves the development and transfer of engineering technology into practical tools for community and local use. These efforts in turn serve the larger state, regional and national interests through improved economics, increased local self reliance and a steadily growing capability to manage and protect our "limited" and vital water resources. It is not glamorous work and rarely receives recognition, but we believe it is a use of Federal and State dollars that addresses local and regional needs in an effective and economical manner.

We respectfully seek your continued support for our programs for the proposed Federal share of our fiscal year 1985 operating expenses in the amount of \$230,000 as indicated in the President's budget request.

x x x

SUSQUEHANNA RIVER BASIN COMMISSION
SALARIES AND EXPENSES
FY 1985 Budget

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Federal Representation

The Susquehanna River Basin Commission was created by Compact (Public Law 91-575) among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development, and control of water and related resources in the region of the Susquehanna River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies, and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control, and development in the Basin; and to encourage the planning, development, and financing of water resources projects according to such plans and policies.

The Commission's membership consists of the Governors of the signatory states, or their appointed designees, and a Federal Member appointed by the President to represent all Federal Agencies and who historically has been the Secretary of the Interior. In addition, each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member, with identical powers of the Member, including the power to vote in the absence of the Member.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government on the Commission and to protect the national interests in the water resource development programs for the Susquehanna River Basin. To accomplish this, the Member and the Commissioner must work closely with all interested Federal departments and agencies, serving as coordinators to assure that Federal interests are fully informed regarding all water resources development programs for the Susquehanna River Basin. They also represent such Federal interests in all actions by the Commission relating to the comprehensive plan and the advisability of individual water resource policies, programs, and projects which the Commission may propose or consider.

An appropriation of \$167,000 for fiscal year 1985 is requested to finance salaries and expenses necessary to enable the United States Commissioner to carry out his responsibilities to protect the Federal Government's interests in the Susquehanna River Basin. This is a \$24,000 decrease from the level appropriated by the Congress for fiscal year 1984.

DISTRIBUTION OF BUDGET AUTHORITY BY ACCOUNT

	1983 <u>Actual</u>	1984 <u>Estimate</u>	1985 <u>Estimate</u>
<u>Appropriation: Salaries and Expenses</u>			
Enacted to date	\$128,000	\$191,000	\$167,000
Proposed supplemental/recission	—	-24,000*	—
Revised estimate.....	\$128,000	\$167,000	\$167,000

SUMMARY OF INCREASES/DECREASES, 1985

<u>Federal Representation:</u>	<u>Base for 1985</u>	<u>Changes</u>	<u>1985 Estimate</u>
Budget Estimate, 1985	\$167,000	—	\$167,000

ANALYSIS BY ACTIVITIES

	FY 1983 Amount Available	FY 1984 Amount Available	(Direct Appropriations) FY 1985 Estimate	Increase (+) or Decrease (-) 1984 Compared with 1985
Federal representation	\$126,000	\$191,000	\$167,000	\$-24,000
Proposed recission (R-84)	—	-24,000*	—	+24,000
Unobligated balance lapsing	2,000	—	—	—
Total	\$128,000	\$167,000	\$167,000	—

JUSTIFICATION

Federal representation; Fiscal Year 1984, \$167,000; Fiscal Year 1985, \$167,000; no change.

<u>Increase (+) or Decrease (-) Amount</u>	<u>Positions</u>	<u>Total Program</u>	<u>Total Positions</u>	<u>Explanation</u>
—	—	\$167,000	2	To continue to provide for the cost of operation of the Commissioner's office.

*A recission of \$24,000 is being proposed for the Commissioner's office in FY 1984 to achieve a level of operation consistent with prior years.

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1541), [\$191,000] \$167,000: (Energy and Water Development Appropriation Act, 1984.)

Program and Financing (in thousands of dollars)			
Identification code 46-0500-0-1-301	1983 Actual	1984 * Estimate	1985 Estimate
Program by activities:			
10.00 Total obligations	126	191	167
Financing:			
25.00 Unobligated balance lapsing ...	2	—	—
40.00 Budget authority (appropriation)	128	191	167
Relation of obligations to outlays:			
71.00 Obligations incurred, net	126	191	167
72.40 Obligated balance, start of year	13	13	13
74.40 Obligated balance, end of year	-13	-13	-13
77.00 Adjustments in expired accounts	2	—	—
90.00 Outlays	128	191	167

Object Classification (in thousands of dollars)			
Personnel compensation:			
11.1 Full-time permanent	102	108	109
11.3 Other than full-time permanent .	—	3	3
11.9 Total personnel compensation .	102	111	112
12.1 Personnel benefits: Civilian ..	10	18	18
21.0 Travel and transportation of persons	1	5	5
23.1 Standard level user charges	4	11	11
23.2 Communications, utilities, and other rent	3	5	5
24.0 Printing and reproduction	1	4	4
25.0 Other services	4	32*	8
26.0 Supplies and materials	1	4	4
31.0 Equipment	—	1	—
99.9 Total obligations	126	191	167

* See Rescission Proposal, Program and Financing Schedule, following Personnel Summary. Included in object class 25.0 for 1984 is \$24,000 proposed for rescission under proposal R-84.

Personnel Summary			
Identification code 46-0500-0-1-301	1983 Actual	1984 Estimate	1985 Estimate
Total number of full-time permanent positions	2	2	2
Total compensable workyears:			
Full-time equivalent employment	2	2	2
Average ES salary	\$63,800	\$66,000	\$66,000
Average GS grade	13.00	13.00	13.00
Average GS salary	\$39,586	\$42,177	\$42,177

SALARIES AND EXPENSES

(Rescission proposal)

Program and Financing (in thousands of dollars)			
Identification code 46-0500-5-1-301	1983 Actual	1984 Estimate	1985 Estimate
Program by activities:			
10.00 Total obligations	--	-24	--
Financing:			
40.01 Budget authority (appropriation rescission proposal R84)	--	-24	--
Relation of obligations to outlays:			
71.00 Obligations incurred, net	--	-24	--
90.00 Outlays	--	-24	--

DETAIL OF PERMANENT POSITIONS			
	1983 actual	1984 estimate	1985 estimate
Special positions at rates equal to or in excess of \$66,000:			
U.S. Commissioner.....	1	1	1
GS/GM-13	<u>1</u>	<u>1</u>	<u>1</u>
Total permanent positions	2	2	2
Unfilled positions, end of year.....	--	--	--
Total permanent employment, end of year .	<u>2</u>	<u>2</u>	<u>2</u>

CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION
FY 1985 BUDGETJUSTIFICATION OF PROGRAM AND PERFORMANCE

The Susquehanna River Basin Commission was created by Compact (Public Law 91-575) among the States of Maryland and New York, the Commonwealth of Pennsylvania, and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development, and control of water and related resources in the region of the Susquehanna River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies, and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control, and development in the Basin; and to encourage the planning, development, and financing of water resources projects according to such plans and policies.

The principal Members of the Commission are the Governors of the signatory States, or their appointed designees, and a Federal Member appointed by the President. The Compact also provides for the appointment of a Commissioner (alternate member) by each Governor and the President with identical powers of the Member and power to vote in the absence of the Member.

The fiscal year 1985 estimate requests \$230,000 to cover the Federal Government's share of the \$1,465,300 current expense budget of the Susquehanna River Basin Commission. The request is the same as appropriated for fiscal year 1984. Authority for the Federal Government's participation in the current expense

budget of the Commission is provided for under Section 14.3 of the Susquehanna River Basin Compact (Public Law 91-575, approved December 24, 1970).

The fiscal year 1985 current expense budget for the Commission totals \$1,465,300 and represents an increase of \$118,200 over its fiscal year 1984 budget. Most of this increase is for incremental costs in salaries and non-discretionary costs of social security, pensions, insurance, and health benefits.

In fiscal year 1985, 26 positions will be funded -- one additional position over the level of staff in fiscal year 1984.

Introduction

The Commission's programs reflect high interest, historic and current water resources issues of national, regional and local concern. Examples are work in the areas of water supply infrastructure analysis, groundwater protection, nonpoint source pollution reduction, identification and protection of wetlands, hazardous waste site identification and assessment of self-help flood damage reduction. The Susquehanna River Basin Commission's fiscal year 1985 operating budget of \$1,465,300 will support the following programs:

Flood Plain Management and Protection

This program has continued since 1972 and has been steadily expanded in scope. The emphasis has been on improved flood warning capabilities at regional and local levels, and in terms of the development of self-help damage reduction programs.

Products of the program have been and will continue to be community flood stage forecast maps, local flood warning systems, flood damage reduction manuals, damage reduction projects for specific public facilities such as wastewater treatment works and an active record file of flood hydrology and hydraulic data.

Water Resources Management

This program involves long-range basic water management and development planning efforts; immediate water supply studies of a regional nature and of specific supply systems within a region.

The long-range program effort involves preparation of a framework water supply plan for the Basin. Mathematical models are being developed by subbasins or appropriate hydrologic units. Specific management and operational plans will be developed for key points of water supply withdrawal and use.

A model community water conservation plan to satisfy the Commission's groundwater withdrawal requirements will be developed and disseminated.

Special water supply activities will include a number of surface and groundwater studies related to development and management of water supply storage at Cowanesque Lake, a Federal flood control project, for low flow consumptive use makeup. One or more specific community water system infrastructure studies will be conducted.

Resource Quality Management and Protection

The Commission's water quality program will include continuing assessment of specific stream sections and critical interstate waters to determine the effectiveness of pollution abatement measures implemented under state and federal programs. A key element of this program is identification of operational and closed landfill areas in these critical watersheds that may be affecting water quality.

The program initiates follow-up actions regarding the Commission's Special Groundwater Study. One specific program will include heavily used aquifers of unconsolidated sediment or fractured limestone. A number of these important aquifers have been overlain with industrial or farming operations or waste disposal sites. The program objectives are to identify these

areas, determine present levels of contamination, if any, and outline the potential hazards. Also the program will address the need for protection for similar areas that have not yet experienced industrial growth or been subjected to disposal operations.

Watershed Management and Protection

The Environmental Protection Agency's Chesapeake Bay Study has identified the Susquehanna River as a major source of nutrient loading to the Upper Bay. The Commission will develop a screening process to enable focusing attention on the most controllable areas, processes and activities that are producing substantial nutrient loading (nitrogen and phosphorus) to the Bay.

Also, the Commission will assist in the Conestoga River Best Management Practices Study, monitoring the effectiveness of the BMP Plan being implemented there under the Rural Clean Water Act.

Recreation, Fish and Wildlife

The Commission will initiate locating and cataloging of wetlands in the Basin. The function and value of these areas in terms of social benefits and effects on water quality will be assessed. The staff will also initiate preparation of a series of recreational maps for the Susquehanna River and its major tributaries.

FY 1985 OPERATING BUDGET

	<u>FY-1983</u> <u>Budget</u>	<u>FY-1984</u> <u>Budget</u>	<u>FY-1985</u> <u>Budget</u>
<u>Revenues:</u>			
<u>Signatory Parties:</u>			
Maryland	\$ 225,000	\$ 230,000	\$ 230,000
New York	90,000	90,000	230,000
Pennsylvania	225,000	230,000	230,000
Federal Government	185,000	230,000	230,000
<u>Other Revenues:</u>			
Cowanesque Water Supply Project	-0-	278,000	231,000
Grant, EPA-Water Quality (106)	90,000	60,000	60,000
Sale of Publications & Misc. Inc.	45,000	50,000	50,000
Building Rental Income	37,000	38,000	40,000
Fiscal Stabilization Fund	<u>214,400</u>	<u>141,100</u>	<u>164,300</u>
TOTAL ALL SOURCES	\$1,111,400	\$1,347,100	\$1,465,300
<u>Expenditures:</u>			
Personal Services	\$ 714,000	\$ 800,000	\$ 850,000
Fringe Benefits	178,500	203,500	265,000
Special & Contractual Services	35,000	104,700	95,400
Travel & Subsistence, Meetings	23,500	37,000	37,000
Communications, Postage	12,000	13,500	15,000
Rent-Machinery & Equipment	1,000	9,500	10,600
Printing, Reproduction, Legal Ads	22,000	22,500	23,000
Repairs & Maint.-Bldg. & Equip.	11,500	12,000	14,500
Other Contractual Services	9,700	9,800	11,000
Taxes, Utilities, Janitorial Services	40,000	49,900	56,000
Mortgage Payments	22,400	25,000	25,000
Supplies & Materials	18,000	29,500	37,800
Misc. Expenses	9,300	7,700	8,500
Automotive & Office Equipment	<u>14,500</u>	<u>22,500</u>	<u>16,500</u>
TOTAL EXPENDITURES	\$1,111,400	\$1,347,100	\$1,465,300

SUSQUEHANNA RIVER BASIN COMMISSION
CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION

COMPARISON OF FUNDING

<u>Appropriation/Activity</u>	<u>Budget Authority</u>		
	<u>1983</u> <u>actual</u>	<u>1984</u> <u>estimate</u>	<u>1985</u> <u>estimate</u>
CONTRIBUTION TO SUSQUEHANNA RIVER BASIN COMMISSION.....	\$217,000	\$230,000	\$230,000

SUMMARY OF INCREASES/DECREASES FOR 1985 BY ACTIVITY

	<u>1985 Base</u>	<u>1985 Estimate</u>	<u>Increase (+) or</u> <u>Decrease (-)</u>
Activity: Contribution to the Commission	\$230,000	\$230,000	--

To provide for the 1985 Federal share of the annual expenses of the Susquehanna River Basin Commission.

JUSTIFICATION

Contribution to the Commission: Fiscal year 1984, \$230,000; fiscal year 1985, \$230,000; No increase.

<u>Amount</u>	<u>Increase (+) or</u> <u>Decrease (-)</u> <u>Positions</u>	<u>Total</u> <u>Program</u>	<u>Positions</u>	<u>Explanation</u>
--	--	\$230,000	--	Federal contribution to 1985 current expense budget of the Susquehanna River Basin Commission.

For payment of the United States share of the current expenses of the Susquehanna River Basin Commission, as authorized by law (84 Stat. 1530, 1531), \$230,000. (Energy and Water Development Appropriation Act, 1984.)

<u>Program and Financing (in thousands of dollars)</u>			
<u>Identification code 46-0501-0-1-301</u>	<u>1983</u> <u>Actual</u>	<u>1984</u> <u>Estimate</u>	<u>1985</u> <u>Estimate</u>
<u>Program by activities:</u>			
10.0001 Total obligations (object class 41.0)	217	230	230
<u>Financing:</u>			
40.0001 Budget authority (appropriation)	217	230	230
<u>Relation of obligations to outlays:</u>			
71.0001 Obligations incurred, net ...	217	230	230
90.0001 Outlays	217	230	230

STATEMENT OF GEORGE J. KANUCK, U.S. COMMISSIONER, DELAWARE RIVER
BASIN COMMISSION

Mr. Chairman and Members of the Committee:

It is a pleasure for me to appear before you again today. I appear before you today in support of the Fiscal Year 1985 appropriation requests for salaries and expenses for the Office of the United States Commissioner and also for the Federal Contribution to the Delaware River Basin Commission.

The Delaware River Basin Commission was created by compact among the States of Delaware, New Jersey, New York, the Commonwealth of Pennsylvania, and the Federal Government (Public Law 87-328). Utilizing the authorities of the compact, the signatory parties participate jointly in managing the conservation, utilization, and development of the water and related land resources of the region.

The Commission's membership consists of the Governors of the signatory states and a Federal Member appointed by the President to represent all Federal agencies. The Federal Member historically has been the Secretary of the Interior. In addition, the President and each Governor appoint an alternate with identical powers of the Member, including the authority to vote in the absence of the Member. The staff of the Commission is comprised of non-Federal employees and receives its direction from the Members and Alternates through the Executive Director.

The duties of the Federal Member and the United States Commissioner are to represent the interests of the Federal Government in the deliberations of the Commission and to protect the national interests in the water resources development programs for the Delaware River Basin. To accomplish this, the Member and the Commissioner work closely with all concerned Federal departments and agencies, keeping them fully informed, coordinating their views, and representing their interests in all Commission decisions relating to the Delaware River Basin Comprehensive Plan (the Commission's primary regulatory tool) and the advisability of individual water resources policies, programs, and projects which the Commission may propose or consider.

SALARIES AND EXPENSES

An appropriation of \$172,000 is requested for Fiscal Year 1985 to provide for the operating expenses of the Office of the United States Commissioner for the Delaware River Basin Commission, i.e., the salary of the United States Commissioner and an assistant, plus incidental expenses relating to personnel benefits, travel, supplies, and other support services. This budget request is \$19,000 less than the appropriation enacted for Fiscal Year 1984.

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

A request of \$283,000—an increase of \$14,000 over last year's appropriation—is to provide the Federal Government's share of the \$2,142,500 current expense budget for the Delaware River Basin Commission. The current expense budget covers expenses of carrying out the regular operating programs of the Commission as described in the Justifications statement previously submitted to the Committee.

Mr. Chairman, accompanying me today is Gerald M. Hansler, Executive Director of the Commission. The Commission has directed me, as the current Chairman of the Commission, and Mr. Hansler to represent its interests before this Committee. Mr. Hansler has submitted a statement to the committee, and I respectfully ask that it be included in the record. Also with me today is Sharon L. Sita, the Interior Department budget analyst who assists my Office on budgetary matters. We will try to respond to any questions you may have regarding the budget requests.

STATEMENT OF GERALD M. HANSLER, EXECUTIVE DIRECTOR, DELAWARE RIVER
BASIN COMMISSION

The Commission supports the Administration's funding level of \$283,000 as the Regular Federal Contribution to the Delaware River Basin Commission (DRBC) for FY 85 as included in The President's Budget.

Insofar as other Federal agency appropriations which have a direct bearing on water resource matters in the basin, and which are addressed by your Subcommittee, the Commission supports the following Corps of Engineers' line items:

Francis E. Walter Modification - PA	\$850,000
Lehigh River Basin Study - PA	411,000
Delaware River Basin Ice Jam Study - NY	120,000
Delaware River Comprehensive Navigation Study - NJ, PA, DE	610,000
Prompton Lake Modification - PA	400,000

The Recommendations of the Parties to the U.S. Supreme Court Decree of 1954, concerning water resource management in the basin, were unanimously agreed to in late February of last year. Their Agreement contains 14 inter-related management steps which basically parallel recommendations contained in our Level B Study. The "Good Faith" document, as it's called, was executed by the Governors of the States of Delaware, New Jersey, New York, Pennsylvania, and the Mayor of New York City.

Seven of the 14 recommendations have already been implemented and the other seven are in various stages of completion. Two of the 14 deal with modification of the Francis E. Walter Reservoir and Prompton Lake flood control projects, so as to include the previously authorized purpose of water supply storage.

I thank you for this opportunity, and am ready to answer any questions now or later by letter.

DELAWARE RIVER BASIN COMMISSION
SALARIES AND EXPENSES
F. Y. 1985 BUDGET

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Federal Representation

The Delaware River Basin Commission was created by Compact between the Delaware River Basin States (Delaware, New Jersey, New York and the Commonwealth of Pennsylvania) and the Federal Government (P. L. 87-328) for the joint management of the Basin's water and related resources.

The Compact directs the Commission to develop and implement comprehensive plans, policies and programs relating to the water resources of the Delaware Basin; to adopt and promote uniform and coordinated policies for water conservation, utilization and development in the Basin; and to encourage the planning, development and financing of water resources projects according to such plans and policies.

The Commission's membership consists of the Governors of the signatory States and a Federal Member appointed by the President to represent all Federal interests. The Federal Member historically has been the Secretary of the Interior. Each Governor and the President are directed to appoint a Commissioner to serve as alternate to the Member, and each has identical powers of the Member, including the power to vote in his absence.

It is the responsibility of the Federal Member and the United States Commissioner to protect the national interests in the affairs and programs of the Commission. The Member and Commissioner must work closely with all interested Federal departments and agencies relative to all actions by the Commission relating to the comprehensive plan and the advisability of individual water policies, programs and projects which the Commission may either propose or consider. They serve as coordinators between the Federal agencies and the Commission to eliminate duplication and to foster complementary efforts.

An appropriation of \$172,000 for F. Y. 1985 is requested to finance the salaries and expenses necessary to enable the United States Commissioner to properly represent the interests of the Federal Government in the workings of the Commission.

DISTRIBUTION OF BUDGET AUTHORITY BY ACCOUNT

	1983 <u>Actual</u>	1984 <u>Estimate</u>	1985 <u>Estimate</u>
<u>Appropriation: Salaries and Expenses</u>			
Enacted to date	\$129,000	\$191,000	\$172,000
Proposed supplemental/recission	—	-19,000*	—
Revised estimate	\$129,000	\$172,000	\$172,000

SUMMARY OF INCREASES/DECREASES, 1985

<u>Federal Representation:</u>	<u>Base for 1985</u>	<u>Changes</u>	<u>1985 Estimate</u>
Budget Estimate, 1985	\$172,000	—	\$172,000

ANALYSIS BY ACTIVITIES

	FY 1983 Amount Available	FY 1984 Amount Available	(Direct Appropriations)	
			FY 1985 Estimate	Increase (+) or Decrease (-) 1984 Compared with 1985
Federal representation	\$127,000	\$191,000	\$172,000	\$-19,000
Proposed rescission (R-84)	—	-19,000*	—	+19,000
Unobligated balance lapsing	2,000	—	—	—
Total	\$129,000	\$172,000	\$172,000	—

JUSTIFICATION

Federal representation; Fiscal Year 1984, \$172,000; Fiscal Year 1985, \$172,000; no change.

Increase (+) or Decrease (-)		Total Program	Total Positions	Explanation
Amount	Positions			
—	—	\$172,000	2	To continue to provide for the cost of operation of the Commissioner's office.

*A rescission of \$19,000 is being proposed for the Commissioner's office in FY 1984 to achieve a level of operation consistent with prior years.

SALARIES AND EXPENSES

For expenses necessary to carry out the functions of the United States member of the Delaware River Basin Commission, as authorized by law (75 Stat. 716), [\$191,000] \$172,000. (Energy and Water Development Appropriation Act, 1984.)

Program and Financing (in thousands of dollars)				
		1983	1984	1985
Identification code 46-0100-0-1-301		Actual	Estimate *	Estimate
Program by activities:				
10.00	Total obligations	127	191	172
Financing:				
25.00	Unobligated balance lapsing ...	2	—	—
40.00	Budget authority (appropriation)	129	191	172
Relation of obligations to outlays:				
71.00	Obligations incurred, net	127	191	172
72.40	Obligated balance, start of year	13	13	13
74.40	Obligated balance, end of year	-13	-13	-13
77.00	Adjustments in expired accounts	1	—	—
90.00	Outlays	128	191	172

Object Classification (in thousands of dollars)

Personnel compensation:			
11.1 Full-time permanent	102	108	109
11.3 Other than full-time permanent ..	—	3	3
11.9 Total personnel compensation .	102	111	112
12.1 Personnel benefits: Civilian ..	11	18	18
21.0 Travel and transportation of persons	3	9	9
23.1 Standard level user charges	4	11	11
23.2 Communications, utilities, and other rent	3	5	5
24.0 Printing and reproduction	—	4	4
25.0 Other services	4	28 *	9
26.0 Supplies and materials	—	4	4
31.0 Equipment	—	1	—
99.9 Total obligations	127	191	172

* See Rescission Proposal, Program and Financing Schedule, following Personnel Summary. Included in object class 25.0 for 1984 is \$19,000 proposed for rescission under proposal R-84.

Personnel Summary

Identification code 46-0100-0-1-301	1983	1984	1985
	Actual	Estimate	Estimate
Total number of full-time permanent positions	2	2	2
Total compensable workyears:			
Full-time equivalent employment	2	2	2
Average ES salary	\$63,800	\$66,000	\$66,000
Average GS grade	13.00	13.00	13.00
Average GS salary	\$39,586	\$42,177	\$42,177

(Rescission proposal)

Program and Financing (in thousands of dollars)

Identification code 46-0100-5-1-301	1983	1984	1985
	Actual	Estimate	Estimate
Program by activities:			
10.00 Total obligations	—	-19	—
Financing			
40.01 Budget authority (appropriation rescission proposal R84)	—	-19	—
Relation of obligations to outlays:			
71.00 Obligations incurred, net	—	-19	—
90.00 Outlays	—	-19	—

SALARIES AND EXPENSES

Detail of Permanent Positions			
Identification code 46-0100-0-1-301	1983	1984	1985
	Actual	Estimate	Estimate
Special positions at rates equal to or in excess of \$66,000:			
U.S. Commissioner	1	1	1
GS/GM-13	1	1	1
Total permanent positions	2	2	2
Unfilled positions, end of year	—	—	—
Total permanent employment, end of year	2	2	2

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION
F. Y. 1985 BUDGET

JUSTIFICATION OF PROGRAM AND PERFORMANCE

Activity: Contribution to the Commission

The Delaware River Basin Commission was created by Compact (P. L. 87-328) among the States of Delaware, New Jersey and New York, the Commonwealth of Pennsylvania and the Federal Government. The purpose of the Compact is to enable the signatory parties to participate jointly in the conservation, utilization, development and control of water and related resources of the Delaware River Basin.

Under the terms of the Compact, the Commission is directed to develop and implement comprehensive plans, policies and programs relating to the water resources of the Basin; to adopt and promote uniform and coordinated policies for water conservation, control and development in the basin; and to encourage the planning, development and financing of water resources projects according to such plans and policies.

The principal Members of the Commission are the Governors of the signatory States, ex officio, and a Federal Member appointed by the President of the United States. The compact also provides for the appointment of a Commissioner (alternate member) by each Governor and the President who has the identical powers of the Member, including the power to vote in his absence.

The Fiscal Year 1985 estimate requests \$283,000 to cover the United States' share of the \$2,143,800 current expense budget of the Delaware River Basin Commission. The request is \$14,000 more than the F. Y. 1984 appropriation. Authority for United States participation in the current expense budget of the Commission is provided under Section 13.3 of the Delaware River Basin Compact (P. L. 87-328, approved September 27, 1961).

The F. Y. 1985 current expense budget for the Commission totals \$2,143,800 and represents a \$102,100 increase over the F. Y. 1984 current expense budget. Most of this increase is for personnel costs and within-grade increases, with other increases to cover higher costs of supplies, space, travel, and equipment rental.

In F. Y. 1985, 38 positions will be funded, which is the same as the F. Y. 1984 level.

The Delaware River Basin Compact mandates activities and provides discretionary authority for a broad range of water resources planning, design, construction and operating functions. In Fiscal Year 1985, the mandated activities will be continued, and essential discretionary planning and operating functions will be performed.

Mandated Activities:

The Compact requires (1) the preparation and maintenance of an up-to-date Comprehensive Plan, (2) the issuance of an annual Water Resources Program, (3) the review of projects having a substantial effect on the water resources of the Basin, (4) the administration of uniform and coordinated standards and procedures and (5) the publication of an annual report.

1. Comprehensive Plan: In F. Y. 1985, the Comprehensive Plan will continue to be revised to include Commission decisions flowing from the Level 3 Study and the "Good Faith" negotiations. This activity will require public hearings before the Commission on a series of issues. Intergovernmental coordination efforts with respect to matters impacting the Basin will continue.

2. Water Resources Program: A Water Resources Program will be prepared, subjected to public hearing, modified as appropriate, approved by the Commission and published. The Water Resources Program will include a systematic presentation of (1) the quantity and quality of water resources needs, (2) the projects* required to satisfy these needs and (3) a separate statement of the projects proposed to be undertaken by the Commission during the ensuing six years.

3. Project Review: Water, or water-related, projects proposed for implementation by any person, corporation or government authority will be reviewed for conformance with the Comprehensive Plan. These reviews, conducted in accordance with the duly issued Rules of Practice and Procedure, will result in recommended courses of action by the Commission.

4. Uniform Standards and Procedures and Their Enforcement: Uniform standards and procedures will be established for the evaluation of projects affecting the Basin and for the determination of project priorities pursuant to the requirements of the Comprehensive Plan; uniform and coordinated policies for water conservation use and management will be promoted. Appropriate enforcement action(s) will be taken where necessary to protect the provisions of the Comprehensive Plan and any standards, regulations, or docket decisions duly promulgated by the Commission.

5. Annual Report: A report on the activities and finances of the Commission for the calendar year will be prepared, published and distributed to the legislative bodies of the signatory parties and the public.

Planning Activities:

Planning programs will be under way in F. Y. 1985 relating to (1) ground water, (2) water demands and conservation, (3) flood loss reduction, (4) pollution control, (5) fish, wildlife and recreation and (6) electric power.

1. Ground Water: The Basinwide ground water investigation, initiated in 1979, was completed in F. Y. 1983. Study recommendations regarding operational concepts will continue to be reviewed for inclusion within the Comprehensive Plan following public hearings. Special funding for a demonstration project regarding pumping from alluvial soils will be pursued.

2. Water Demands and Conservation: The basic elements of water demand projections, i.e., population, unit water uses, economic base, etc., will be compiled utilizing 1980 census data. A depletive use budget will be adopted in 1985. The Commission has continuing long-term policies to reduce water use

* "Project" is defined by the Compact as "any work, service or activity," as well as water-related facilities or additions to such facilities.

throughout the Basin through conservation efforts and to require maximum feasible efficiency in the use of water by new and existing water users. All new water supply projects reviewable by the Commission are assessed against the Commission's water conservation policies. These on-going conservation efforts have been augmented as a result of recommendations of the Interstate Water Management Recommendations.

3. Flood Loss Reduction: Work will continue on a comprehensive Basinwide flood loss reduction plan and considered by the Commission for possible inclusion within its Comprehensive Plan. A flood insurance study for Pocono Township, Pennsylvania will be completed in 1985.

4. Pollution Control: The multi-faceted pollution control program totalling \$694,600 will continue in F. Y. 1985, funded in part with a proposed \$230,000 grant from the Federal Environmental Protection Agency. The program will encompass the following activities in F. Y. 1985:

Allocation of Estuary Waste Assimilative Capacity. The reallocation of the assimilative capacity of Zones 2 through 5 of the Delaware River will be continued during F. Y. 1985 in close association with the U. S. Environmental Protection Agency, the States of Delaware, New Jersey and Pennsylvania, and 208 planning agencies. This activity will require mathematical model computer runs, notices of preliminary allocations, hearings on objections before hearing panels, reports to the Commission by the panels and Commission decision. This is expected to be a major pollution control activity in 1984 and 1985.

Zone 2 Study. Studies initiated in F. Y. 1981 (but delayed due to funding cutbacks) leading to a plan—both engineering and financial—to solve the problems caused by non-point loads in the Delaware estuary Zone 2 will be continued in F. Y. 1985 if funds are available.

Water Quality Data Collection. The Commission will compile and make available to interested parties data on the quality of Basin surface and ground waters. The Commission will act as the cooperating agent with the U.S.G.S. for monitors in the estuary.

Water Quality Standards. The Commission will continue to develop and adopt interstate water quality standards that are consistent with the laws of the land and the water management plan of the Basin.

Coordination. The interstate aspects of state water quality programs will be coordinated by the Commission. The reports required by P. L. 94-500, Section 305(b), will be prepared by the Commission for the interstate Delaware River.

5. Fish and Recreation: The Commission will consider including in the Delaware River Basin Commission's Comprehensive Plan the land management plan associated with the Upper Delaware Scenic and Recreation River, which is to be completed by the U. S. National Park Service in F. Y. 1984 and which involves the cooperative efforts of the Service, the Commission, the States of New York and Pennsylvania and the counties bordering the River.

Liaison and coordination with fish management agencies will continue with respect to issues pending before the Commission.

6. Electric Power: The Commission and Pennsylvania have been issued preliminary permits by the Federal Energy Regulatory Commission (FERC) and have completed feasibility studies of the hydropower potential of Blue Marsh and Prompton Reservoirs. An application for a license was submitted jointly with PaDER to FERC for developing hydropower at Blue Marsh Reservoir. An additional feasibility study of the potential of a small hydroelectric plant to use modular components and pumps as turbines at Blue Marsh Reservoir was completed in F. Y. 1984. A program to obtain financing for that project will continue in F. Y. 1985, as will detailed design studies.

Contact will be maintained with the electric power companies to keep abreast of water demands related to the industry and modifications foreseen to their Master Siting Study.

Operating Activities:

The Commission's water sales program will be administered. This program involves execution of contracts with major water users and the assessment of fees against minor water users under the self-administering arrangement. The legal entitlement program as it relates to municipal and industrial withdrawers of water was completed in F. Y. 1979. Work remains for agricultural entitlements and will be continued in F. Y. 1985. In F. Y. 1985, new water sales contracts will be negotiated, current contracts monitored, and self-invoicing procedures spot-checked. Field checking of water users' facilities will be carried out as staff time permits.

Ground Water Protected Area: Under contractual arrangements with the State of Pennsylvania, the Commission will continue to administer special regulations regarding the use of ground water in portions of Berks, Bucks, Chester, Lehigh and Montgomery Counties, Pennsylvania. These special regulations will apply to the Commission's designated "Southeastern Pennsylvania Ground Water Protected Area." In addition to meeting all current requirements of the Comprehensive Plan and Rules of Practice and Procedures, applicants seeking permission to withdraw more than 10,000 gallons per day will be required to demonstrate that the requested use would not (1) render supplies in the underground basin unreliable, (2) cause long-term progressive lowering of water levels, (3) cause water quality degradation, (4) result in permanent loss of storage capacity nor (5) substantially impact perennial streams. Such applicants will be required to take a number of conservation measures and file a drought emergency plan with the Commission. All present users of more than 10,000 gallons per day will be required to register their wells with the Commission in order to attain the protection offered by the declaration.

CURRENT EXPENSE BUDGET
F. Y. 1985

	Revised FY 1983 Budget	Revised FY 1984 Budget	FY 1985 Request	(+) Increase (-) Decrease
<u>Revenues:</u>				
Signatory Parties:				
Delaware	\$ 149,800	\$ 158,800	\$ 166,800	\$ + 8,000
New Jersey	398,000	398,000	443,000	+45,000
New York	180,000	180,000	265,000	+85,000
Pennsylvania	578,600	613,200	643,900	+30,700
Federal Government	269,000	269,000	283,000	+14,000
Miscellaneous:				
Other	45,800	46,000	62,100	+16,100
Fund Balance	42,300	37,800	50,000	+12,200
EPA Water Quality Grant	240,000	230,000	230,000	—
Contingency	46,000	108,900	—	-108,900
Total	\$1,949,500	\$2,041,700	\$2,143,800	\$+102,100
<u>Expenditure Categories:</u>				
Personal Services	\$1,159,800	\$1,222,000	\$1,290,300	\$+ 68,300
Special and Contractual Services	229,700	214,000	214,000	—
Services Other Than Personal	25,600	26,800	27,000	+ 200
Supplies and Materials	40,000	35,000	45,000	+ 10,000
Space	171,500	170,000	180,000	+ 10,000
Communications	45,350	50,000	50,000	—
Travel	22,100	18,000	22,000	+ 4,000
Maintenance and Replacements	22,450	27,900	31,000	+ 3,100
Equipment Purchase or Rental	32,600	28,000	34,500	+ 6,500
Grants, Fringe Benefits and Other	200,400	250,000	250,000	—
Total	\$1,949,500	\$2,041,700	\$2,143,800	\$+102,100

F. Y. 1965 FEDERAL FUNDING SUMMARY

Revenues:

DRBC Payment to Corps of Engineers (Repayment of Water Supply Storage)	\$614,000
DRBC Payment to U.S.G.S. (Stream Gauges)	56,000
	<u>\$672,000</u>

Expenditures:

Regular Federal Contribution to DRBC	\$283,000
EPA Water Quality Grant	230,000
	<u>\$513,000</u>

F. Y. 1965 CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

COMPARISON OF FUNDING

<u>Appropriation/Activity</u>	<u>Budget Authority</u>		
	<u>1963</u> <u>Actual</u>	<u>1964</u> <u>Estimate</u>	<u>1965</u> <u>Estimate</u>
CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION	\$269,000	\$269,000	\$283,000

SUMMARY OF INCREASES/DECREASES FOR 1965 BY ACTIVITY

	<u>1965 Base</u>	<u>1965 Estimate</u>	<u>Increase (+) or Decrease (-)</u>
Activity: Contribution to the Commission.....	\$269,000	\$283,000	\$+14,000

To provide for the Federal share of the 1965 annual expenses of the Delaware River Basin Commission.

JUSTIFICATION

Contribution to the Commission: Fiscal Year 1964, \$269,000; Fiscal Year 1965, \$283,000; increase, \$14,000.

<u>Increase (+) or Decrease (-)</u>		<u>Total Program</u>	<u>Total Positions</u>	<u>Explanation</u>
<u>Amount</u> <u>Positions</u>				
\$+14,000 —		\$283,000	—	To provide for the Federal share of the Delaware River Basin Commission's 1965 current expense budget.

CONTRIBUTION TO DELAWARE RIVER BASIN COMMISSION

For payment of the United States share of the current expenses of the Delaware River Basin Commission, as authorized by law (75 Stat. 706, 707), [\$269,000] \$283,000. (Energy and Water Development Appropriation Act, 1984.)

Program and Financing (in thousands of dollars)				
Identification code 46-0102-0-1-301		1983 Actual	1984 Estimate	1985 Estimate
Program by activities:				
10.00	Total obligations (object class 41.0)	269	269	283
Financing:				
40.00	Budget authority (appropriation)	269	269	283
Relation of obligations to outlays:				
71.00	Obligations incurred, net	269	269	283
90.00	Outlays	269	269	283

STATEMENT OF WARREN G. STAMBAUGH, CHAIRMAN, INTERSTATE COMMISSION ON THE
POTOMAC RIVER BASIN

THANK YOU, MR. CHAIRMAN, FOR THIS OPPORTUNITY TO SUPPORT A FISCAL YEAR 1985 FEDERAL APPROPRIATION FOR THE INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN. MY NAME IS WARREN STAMBAUGH. I AM THE CHAIRMAN OF THE COMMISSION, A MEMBER OF THE VIRGINIA HOUSE OF DELEGATES, AND ONE OF THREE COMMISSIONERS APPOINTED BY THE GOVERNOR OF VIRGINIA. I HAVE WITH ME PAUL EASTMAN, EXECUTIVE DIRECTOR OF THE COMMISSION.

THE PRESIDENT'S FISCAL YEAR 1985 BUDGET RECOMMENDED NO APPROPRIATION FOR ICPRB. WE REQUESTED \$70,000 AS THE FAIR FEDERAL SHARE OF THE TOTAL BUDGET OF \$591,000. THE ICPRB INCLUDES THREE PRESIDENTIALLY APPOINTED COMMISSIONERS, WHO REPRESENT THE INTERESTS OF THE FEDERAL GOVERNMENT, ONE OF THE LARGEST WATER USERS AND RIPARIAN LANDOWNERS ON THE RIVER. THE FEDERAL SHARE HAS HISTORICALLY BEEN EQUAL TO--NEITHER MORE NOR LESS THAN--THE LARGEST OF THE REQUESTED STATE CONTRIBUTIONS. THIS VERY TANGIBLY SIGNIFIES A FULL AND EQUAL PARTNERSHIP IN A VITAL JOINT MISSION.

THE AUTHORITY FOR THE FEDERAL APPROPRIATION TO ICPRB IS ARTICLE IV OF THE POTOMAC BASIN COMPACT AS AMENDED BY PUBLIC LAW 92-407, 91st CONGRESS, IN SEPTEMBER 1970. IT STATES "THE MONEYS NECESSARY TO FINANCE THE COMMISSION IN THE ADMINISTRATION OF ITS BUSINESS IN THE CONSERVANCY DISTRICT SHALL BE PROVIDED THROUGH APPROPRIATIONS FROM THE SIGNATORY BODIES {THAT IS, DISTRICT OF COLUMBIA, MARYLAND, PENNSYLVANIA, VIRGINIA AND WEST VIRGINIA} AND THE UNITED STATES..." CONGRESS HAS REAFFIRMED ITS ORIGINAL MANDATE BY APPROPRIATING FUNDS TO THE COMMISSION FOR A FEDERAL SHARE EVERY YEAR BEGINNING WITH FISCAL YEAR 1949.

• YOU HAVE OUR BUDGET JUSTIFICATION SO I WILL ONLY BRIEFLY HIGHLIGHT MAJOR WORK PROGRAM ITEMS IN THIS SUMMARY STATEMENT.

THE ICPRB, THE FEDERAL GOVERNMENT, THE STATE OF MARYLAND, THE COMMONWEALTH OF VIRGINIA, THE DISTRICT OF COLUMBIA, AND TWO LOCAL WATER UTILITIES LAID THE CORNERSTONE FOR THE NATIONAL

CAPITAL AREA WATER SUPPLY SOLUTION IN JULY 1982 WHEN THEY EXECUTED EIGHT SEPARATE AGREEMENTS THAT ASSURE THE AREA AN ADEQUATE WATER SUPPLY WELL INTO THE NEXT CENTURY. THE AGREEMENTS MANDATE THAT THE ICPRB SECTION FOR COOPERATIVE WATER SUPPLY OPERATIONS ON THE POTOMAC (CO-OP) IMPLEMENT COORDINATED WATER SUPPLY OPERATIONS FOR THE NATIONAL CAPITAL AREA. THE AGREEMENTS OF JULY 1982 ARE THE RESULT OF A FIVE YEAR INVOLVEMENT OF THE CO-OP STAFF IN DEVELOPING THE TECHNICAL FRAMEWORK FOR THE WATER SUPPLY SOLUTION AND THE START OF THE ON-GOING COMPUTER-BASED MATCHING OF SUPPLY TO DEMAND.

THE SOLUTION OF THE AREA'S WATER SUPPLY PROBLEM DOES NOT INVOLVE THE CONSTRUCTION OF MAJOR NEW PROJECTS, BUT RELIES RATHER ON THE COOPERATIVE OPERATION AND EFFICIENT MANAGEMENT OF EXISTING SUPPLIES. THE U.S. ARMY CORPS OF ENGINEERS IN THEIR 1983 METRO WASHINGTON WATER SUPPLY REPORT ACCEPTED THIS ALMOST COSTLESS COOPERATIVE SOLUTION AS BY FAR THE BEST. ITS VALUE IS OBVIOUS WHEN IT IS COMPARED WITH THE "STRUCTURAL SOLUTIONS" PROPOSED BY THE CORPS IN THE 1977 NORTHEAST WATER SUPPLY STUDY WHICH RANGED IN COST BETWEEN \$250 MILLION AND \$1,000 MILLION. THESE SAVINGS OF HUNDREDS OF MILLIONS OF DOLLARS ARE IN STARK CONTRAST TO THE TOTAL ANNUAL COST OF THE COMMISSION'S OPERATION OF LESS THAN \$600,000 AND OUR FEDERAL APPROPRIATION REQUEST OF \$70,000.

THE DROUGHT MANAGEMENT SYSTEM BEING IMPLEMENTED BY CO-OP DEPENDS ON 1) EARLY DETECTION OF DROUGHTS, BASED ON LONG-RANGE STREAMFLOW FORECASTS, 2) ACCURATE SHORT-TERM WATER USE AND SUPPLY FORECASTS DURING DROUGHT PERIODS, AND 3) OPTIMAL ALLOCATION OF SUPPLIES ON A REGIONAL BASIS DURING DROUGHT PERIODS. THE SYSTEM WAS TESTED AND PROVEN SUCCESSFUL DURING LAST YEAR'S LONG DRY SUMMER. IN THE SPRING, CO-OP FORECAST ADEQUATE POTOMAC RIVER FLOWS THROUGHOUT THE SUMMER. ALTHOUGH IMPACTED BY THE DROUGHT, THE FLOWS REMAINED SUFFICIENT TO MORE THAN SATISFY THE HIGHEST USE OF WATER FROM THE RIVER IN HISTORY.

ICPRB ALSO HAS ACCEPTED THE CHALLENGE OF A LEADERSHIP ROLE IN CONTINUING THE IMPROVEMENT OF WATER QUALITY IN THE POTOMAC ESTUARY, THE LARGEST ARM OF CHESAPEAKE BAY. THIS IS A NATURAL FOLLOW-UP TO THE DECEMBER 1983 CHESAPEAKE BAY CONFERENCE AND THE EARLIER EPA REPORTS ON THE BAY. IT IS EVEN MORE IMPORTANT BECAUSE OF THE EXTRAORDINARY BLUE-GREEN ALGAE BLOOM IN THE UPPER ESTUARY DURING THE SUMMER OF 1983 AND THE APPEARANCE OF A NUISANCE SUBMERSED AQUATIC PLANT (HYDRILLA). THE LATTER ALREADY IS A DISASTER TO THE NATIONAL PARK SERVICE'S DYKE MARSH BELOW ALEXANDRIA, VA. UNLESS CONTROLLED, HYDRILLA COULD RUIN ANOTHER 30,000 ACRES OF SHORELINE WATER IN THE UPPER ESTUARY. BOTH OF THESE DISTRESSING PHENOMENA OCCURRED WHEN GREAT REDUCTIONS IN POINT SOURCE POLLUTION HAD BEEN ACHIEVED ALONG WITH IMPROVED WATER QUALITY AND INCREASED FISHING, BOATING AND OTHER WATER-RELATED RECREATION.

ICPRB IS WORKING WITH OTHERS (METRO WASHINGTON COUNCIL OF GOVERNMENTS, USEPA, DC, MD AND VA) TO DETERMINE THE CAUSES AND POSSIBLE CORRECTIONS OF THE EXTRAORDINARY ALGAE BLOOM. THE UNUSUALLY HEAVY SPRING RUNOFF LADEN WITH NONPOINT SOURCE NUTRIENTS FROM THE UPPER BASIN; THE DRY, SUNNY AND HOT WEATHER CONDITIONS FROM JUNE UNTIL OCTOBER; THE LOW SUMMER POTOMAC FLOWS; THE POINT SOURCE NUTRIENT DISCHARGES; AND OTHER FACTORS WILL BE INVESTIGATED ALONG WITH ANY POSSIBLE MEANS OF CONTROL. 1983 DEMONSTRATED THAT MUCH REMAINS TO BE DONE EVEN THOUGH THERE HAS BEEN AN OBVIOUS NET GAIN FOR THE POTOMAC IN THE PAST TEN YEARS.

ICPRB ALREADY IS FOCUSSED ITS STUDY EFFORTS ON THE TRANSPORT OF SEDIMENT AND ASSOCIATED NUTRIENTS TO THE ESTUARY FROM NONPOINT SOURCES SUCH AS AGRICULTURE IN THE UPPER BASIN. APPROXIMATELY 50 MILLION TONS OF SEDIMENT ARE ERODED EACH YEAR FROM THE UPPER BASIN BUT AN AVERAGE OF LESS THAN 2 MILLION TONS ARE DELIVERED TO THE ESTUARY BY THE RIVER. EROSION OF SEDIMENT AND NUTRIENTS CAN BE REDUCED FROM THE UPPER BASIN AND THE ON-SITE AND OTHER LOCAL BENEFITS ARE READILY APPARENT. HOWEVER,

EFFECTS OF THESE NONPOINT SOURCE CONTROLS ON DOWNSTREAM DELIVERY OF SEDIMENT AND NUTRIENTS TO THE ESTUARY ARE NOT CLEAR.

OUR STUDIES WILL PROVIDE FUTURE GUIDELINES FOR DETERMINING HOW FAR UPSTREAM AND OVER WHAT TIME PERIOD NONPOINT SOURCE CONTROLS WILL BE EFFECTIVE IN IMPROVING ESTUARY WATER QUALITY. THE RESULTS ARE VITAL TO COST EFFECTIVE APPLICATION OF NONPOINT SOURCE POLLUTION CONTROLS FOR FURTHER CLEANUP OF THE POTOMAC ESTUARY AND CHESAPEAKE BAY.

SPECIFICALLY WITH REFERENCE TO THE HYDRILLA PROBLEM, ICPRB HAS ORGANIZED THE HYDRILLA ACTION COMMITTEE (HYDRAC) AT THE REQUEST OF THE NATIONAL PARK SERVICE. ITS OBJECTIVE IS TO DEVELOP AND APPLY MANAGEMENT MEASURES TO PREVENT THE DAMAGING SPREAD OF THIS NUISANCE SUBMERSED AQUATIC PLANT. CHAIRED BY ICPRB, THE COMMITTEE INCLUDES REPRESENTATIVES OF THE NATIONAL PARK SERVICE AND OTHER FEDERAL, STATE AND REGIONAL AGENCIES.

ICPRB PLAYS A UNIQUE INTERGOVERNMENTAL ROLE IN THE POTOMAC BASIN. IT HAS PUT FEDERALISM INTO CONCRETE--AND SUCCESSFUL--PRACTICE FOR OVER 40 YEARS. WITHOUT FEDERAL PARTICIPATION, THERE WILL BE AN EMPTY PLACE AT THE TABLE. FEDERAL PARTICIPATION ENHANCES EFFICIENCY AND EFFECTIVENESS OF THE ESSENTIAL LOCAL-STATE-FEDERAL RELATIONSHIPS SO VITAL TO THE NATIONAL CAPITAL AND OTHER NATIONAL INTERESTS IN THE BASIN. I FEEL STRONGLY THAT THE BENEFITS TO THE FEDERAL GOVERNMENT FAR EXCEED THE COST OF THE \$70,000 APPROPRIATION WHICH WE ARE REQUESTING.

THANK YOU AGAIN FOR THE OPPORTUNITY TO TESTIFY, AND NOW MR. EASTMAN AND I WILL BE HAPPY TO ANSWER YOUR QUESTIONS.

LETTER FROM PAUL W. EASTMAN, P.E., EXECUTIVE DIRECTOR, INTERSTATE COMMISSION
ON THE POTOMAC RIVER BASIN

February 1, 1984

Hon. Mark O. Hatfield, Chairman
Subcommittee on Energy and
Water Development
Committee on Appropriations
U.S. Senate
Washington, D.C.

Dear Chairman Hatfield:

As requested, I am sending you the enclosed 25 copies of the Fiscal Year 1985 budget justification for the Interstate Commission on the Potomac River Basin (ICPRB). The President's FY 1985 budget released today recommends no appropriation for ICPRB. ICPRB requested \$70,000 as the fair federal share of the total ICPRB FY 1985 expenditure budget of \$591,000 approved by the ICPRB Commissioners, including the three Presidentially-appointed Commissioners.

The authority for the Federal Government appropriations to ICPRB is Article IV of the Potomac Basin Compact as amended by Public Law 91-407, 91st Congress, approved September 25, 1970 (80 Stat. 856). It states, "The moneys necessary to finance the Commission in the administration of its business in the Conservancy District shall be provided through appropriations from the signatory bodies (DC, MD, PA, VA and WV) and the United States..." Congress has appropriated funds to the Commission for the federal share every year beginning with FY 1949.

The success of ICPRB's Cooperative Water Supply Operations Section (CO-OP) during the unusually dry, hot summer of 1983 is an example of the value of ICPRB to the National Capital. ICPRB CO-OP has developed and will continue to operate the computerized analytical programs for cooperative operations of reservoirs and water supply withdrawals of local and state governments and the Corps of Engineers. This will assure water supply reliability for the National Capital region well beyond the year 2000, maintenance of streamflows to protect water quality and aquatic ecosystems, and maximization of other reservoir purposes, i.e., recreation and flood control. ICPRB CO-OP's operations thus eliminate the need in the near future for construction of additional reservoir storage in the upper Potomac basin, a saving of an estimated \$250 million as proposed in earlier plans.

The federal and state commissioners recommend that the full formula share of \$70,000 is justified as a fair and reasonable U.S. Government appropriation to the ICPRB for FY 1985.

Sincerely yours,

Paul W. Eastman, P.E.
Executive Director

Jan. 1984

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

Fiscal Year 1985 Budget Justification

(October 1, 1984-September 30, 1985)

A. HISTORY:

The Interstate Commission on the Potomac River Basin (ICPRB) was created with the Potomac Basin Conservancy Compact of 1940 by the signatory bodies, i.e., the Commonwealths of Virginia and Pennsylvania, the States of Maryland and West Virginia, and the District of Columbia. The 1940 Compact was developed for the purpose of controlling pollution in the Potomac drainage area and the U.S. Congress approved it on July 11, 1940. The signatory bodies later ratified amendments to the Compact to broaden the Commission's coordination, investigation, and education responsibilities to include "development, utilization and conservation of the water and associated land resources" of the basin. The U.S. Congress approved the amendments with the passage of Public Law 91-407 on September 25, 1970. Members of the Commission are appointed by the Chief Executive (Governor or Mayor) of each signatory body according to provisions of its ratifying statute and by the President for the federal government.

B. SERVICE AREA:

The service area covers the 14,700 square miles of the Potomac drainage basin in the District of Columbia and parts of Maryland, Pennsylvania, Virginia and West Virginia, including several thousand square miles of national parks and forests and other federally-owned lands.

C. ORGANIZATION:

All ICPRB responsibilities under the Compact are vested in the Commission which is administered by the Commissioners (three plus alternates from each of the four states, the District of Columbia and the federal government, through an executive director and staff located in Rockville, Maryland. The Commissioners meet quarterly in March, June, September and December to carry out their policy direction and other responsibilities. Between quarterly meetings, this function is vested in the Executive Committee which is composed of one member from each jurisdiction and meets on the call of the Chairman.

D. WORK PROGRAM:

1. Water Supply --

Implementation of the Potomac Water Supply Coordination Agreement of July 22, 1982 for management of upper basin storage reservoirs (Bloomington Lake and Savage River Reservoir) and downstream water supply withdrawals in the Metro Washington Area through the CO-OP Section (Cooperative Water Supply Operations on the Potomac). ICPRB CO-OP has developed and will continue to refine and operate the computerized analytical programs for cooperative operations of reservoirs and withdrawals to assure water supply reliability, maintenance of streamflows to protect water quality and aquatic ecosystems, and maximization of benefits to other reservoir purposes. This has eliminated the need for additional reservoir storage in

the upper Potomac basin until well after the year 2000, thus saving a minimum of an estimated \$250 million as proposed in earlier plans.

2. Water Quality --

a. Assistance to states in the implementation of Chesapeake Bay clean-up program initiatives with a leadership role for the Potomac estuary arm of the Bay; investigation of additional point and nonpoint source pollution controls necessary for continued improvement of the Potomac estuary; participation in the Potomac Strategy Committee (USEPA, DC, MD, VA, ICPRB and Metro Washington Council of Governments) cooperative planning for Potomac estuary water quality management and evaluation of the extraordinary summer 1983 blue green algae bloom; and investigation of control methodology for *Hydrilla*, a nuisance aquatic plant causing problems in marshlands (e.g. the National Park Service's Dyke Marsh) and upper estuary embayments through the *Hydrilla* Advisory Committee (HYDRAC) chaired by ICPRB.

b. Development and implementation of recommended policies and procedures for minimizing instream conflicts between water supply and water quality and for enhancing fisheries and recreational benefits for the Potomac riparian states below the Savage River and new Bloomington reservoirs and downstream to the Potomac tidewater. This will continue to be achieved through the Instream Flow Committee composed of representatives from federal and state water and fisheries agencies and chaired by ICPRB.

c. Coordination of the Potomac basin surface water quality monitoring network by means of a task force of state and federal representatives, and evaluation and reporting on pollution control progress and water quality trends throughout the five-state basin.

d. Development and refinement of technical tools, such as mathematical computer models relating wastewater treatment levels to instream quality parameters, for evaluating the attainability of water quality standards and opportunities for savings in the costs of wastewater treatment and other pollution controls, and for maintaining interstate compatibility of standards and pollution control programs.

e. Maintenance and extension of a toxic spill model for the Potomac and major tributaries as an early warning system for water supply intakes.

f. Promotion and assistance with major water-related projects and research to solve problems of interstate significance, for example, acid pollution from abandoned mines in the Potomac North Branch sub-basin. The latter includes evaluation of the changing relative influences on water quality of the uncontrolled acid drainage from the abandoned mines and the treated drainage from active mines, the development of priorities for expenditures on abandoned mine reclamation projects for the most efficient utilization of money allocated to the Potomac North Branch sub-basin in West Virginia and Western Maryland from the Federal Abandoned Mine Reclamation Fund, and the development of recommended procedures for operating Bloomington Lake which most effectively maintain water quality in the Lake and downstream in the North Branch.

3. Public Education and Information --

Publication of 9 issues each year of the Potomac Basin Reporter, the only basin-wide current event water information periodical; organization and conduct of an annual State of the Potomac public meeting and publication of reports for the lay public; continuation of summer Potomac River Watch weekly reports about water quality and recreational opportunities for use by the news media; continuation of the news media outreach program about the basin's water resources, especially the improved water quality, recreation and other values of the Potomac and its tributaries throughout the basin; and maintenance and updating of the library of Potomac basin information materials for use by technical organizations and the public and for responding to the usual 100 or more annual requests for Potomac-related educational material and information.

E. PROPOSED FISCAL YEAR 1985 BUDGET:

Table 1 shows proposed expenditures in FY 1985 by major categories along with actual and budgeted expenditures for FY 1983 and 1984. Table 2 shows proposed member state and federal appropriations and anticipated income from other sources for FY 1985 together with actual and budgeted amounts for FY 1983 and FY 1984.

Table 1

Interstate Commission on the Potomac River Basin
Proposed Expenditures for Fiscal Year 1985
 (Including actual and budgeted amounts for FY 1983 and FY 1984)

<u>Major Expenditure Categories(1)</u>	<u>Actual FY 1983</u>	<u>Budgeted FY 1984</u>	<u>Proposed FY 1985</u>
Personnel Salaries and Benefits	\$ 453,189	\$ 503,138	\$ 430,000(2)
Rent, Office Expense, Travel, etc.	101,228	95,819	91,000
CO-OP Section Computer Equipment	14,287	25,402	3,000
Publications	19,739	27,325	36,000
Consultants	6,035	11,400	31,000
Total Budget	\$ 594,478	\$ 663,084	\$ 591,000
Total Staff(3)	14.6	15.2	13.3(4)

- (1) Includes expenditures of Section on Cooperative Water Supply Operations on the Potomac (CO-OP Section) organized under Article III of the Potomac Basin Compact and supported by contributions of Washington Metro Area water utilities.
- (2) Allows for approximately 4% increase in salaries to maintain comparability with U.S. Civil Service.
- (3) Includes permanent part-time employees and temporary summer technical aides.
- (4) Permanent staff reduced but supplemented by consultant time.

Table 2

Interstate Commission on the Potomac River Basin
Proposed Contributions for Fiscal Year 1985
 (Including actual and budgeted amounts for FY 1983 and FY 1984)

Source*	Actual FY 1983	Budgeted FY 1984(1)	Proposed FY 1985(1)
<u>Signatory States</u>			
District of Columbia	\$ 37,700	\$ 40,500	\$ 41,450
Maryland	57,450	55,200(2)	70,100
Pennsylvania	18,525	20,400	20,600
Virginia	63,818	58,470(2)	66,250
West Virginia	24,527	30,350(2)	19,600
States Subtotal	\$202,030	\$204,920	\$218,000
Direct U.S. Appropriation	55,000(3)	68,000	70,000
USEPA Annual Program Grant under Section 105 Fed. Clean Water Act	173,000	160,000	160,000
CO-OP Contribution from Water Utilities(4)	139,735	158,088	140,000
Other Sources (Interest, Pub. Sales, etc.)	17,464	5,000	10,000
Carryover from Previous Year	<u>126,161(5)</u>	<u>118,921</u>	<u>51,800</u>
TOTAL	\$713,390	\$714,929	\$649,800

*The Congressionally approved interstate compact establishing the Commission specifies that it shall be financed "by appropriations from the signatory bodies and the United States", with the pro rata contributions to be "based on such factors as population; the amount of industrial and domestic pollution; and a flat service charge." The formula for state contributions was revised for FY 1984 and beyond and includes a flat service charge of \$15,000 with 3/4 of the remainder prorated by the 1980 census population in the basin and 1/4 by major industrial and municipal point source pollution. The fair share contribution of the United States has been agreed to equal the largest of the state contributions due to the impact of the National Capital and the federal lands and other interests in the basin.

- (1) Changes in contributions are a result of changes in formula for FY 1984 and beyond (see * above) and small increase to partially make-up for reduction in annual program grant from USEPA.
- (2) MD appropriated \$13,000 less than requested; VA appropriated \$6,000 less than requested; WV appropriated \$11,000 more than requested to partially make up for past deficiencies.
- (3) Amount appropriated by U.S. Congress; Federal share requested was \$66,000.
- (4) Washington Suburban Sanitary Commission (MD), Fairfax County Water Authority (VA), and Dept. of Environmental Services (DC).
- (5) Includes approximately \$42,500 which is the amount transferred in late FY 1982 to ICPRB from the Potomac Basin Advisory Committee dissolved by action of the Governors of the basin states and the Mayor of D.C. in May 1982.

INTERSTATE COMMISSION ON THE POTOMAC RIVER BASIN

SUMMARY OF ACCOMPLISHMENTSFiscal Year 1983 (Oct. 1, 1982-Sept. 30, 1983)Water Quality Monitoring Evaluation and Assistance

- The Commission continued its coordination of the Potomac Basin Baseline Water Quality Monitoring Network (BWQMN) throughout the year. Staff completed the preparation of the 74-page 1980-81 biennial basin water quality report^{1/} for distribution early in 1983. It describes water quality trends in each of the six basin sub-divisions (Potomac Highlands, Upper Great Valley, Shenandoah Sub-basin, Potomac Piedmont, Potomac Urban Estuary, and Lower Potomac Estuary). Graphs showing water quality trends were prepared for the report using the ICPRB computer-based plotter. Staff also prepared a condensation of the full report for the Potomac Basin Reporter.
- Staff continued to chair the Metro Washington Regional Monitoring Committee which is coordinating state and local government monitoring and evaluation activities in the metropolitan area. The Metro Washington Council of Governments provides staff support for compiling and interpreting the data in quarterly and annual reports. The first annual report which contains a detailed review of water pollution control progress on the Potomac in the metro area from 1970 to 1982 is due for publication in the fall of 1983.^{2/} The report uses the index for generalized description of water quality conditions first developed and used by ICPRB in its basinwide water quality reports.

The regional monitoring committee also arranged and coordinated weekly monitoring of the upper Potomac tidewater during August and September 1983. The weekly monitoring was arranged to supplement the usual monthly monitoring due to the unexpected prolific algae blooms. The additional data is necessary to provide a basis for determining the cause and developing a control strategy beyond that which already is in place to prevent a recurrence. (See Potomac Strategy Committee discussion).

- Staff responded to requests for data retrievals from the U.S. Environmental Protection Agency's computerized water quality system (STORET) by the D.C. Department of Environmental Services, the Metropolitan Washington Council of Governments and others. A training seminar was arranged with the STORET Assistance Branch of EPA and held at the ICPRB office. Approximately 20 people attended, including Commission staff, state and federal agency personnel and private consultants.
- Work on development of a toxic spill model for the Potomac and major tributaries continued during the year. The USGS Md.-Va. District Office provided the data from earlier time-of-travel studies on the Potomac main stem from

^{1/} Potomac River Basin Water Quality, 1980-81, Basin
V. James, Jr. and Keith M. Brooks, ICPRB Tech. Pub. 82-1,
Dec. 1982.

^{2/} Potomac Water Quality 1982, Conditions and Trends in
Metropolitan Washington, Water Resources Planning Board,
Metro Washington Council of Governments (at the printer).

Cumberland to Washington and the major north branch tributaries (Conococheague, Antietam and Monocacy), which were partially financed by ICPRB. The computer model is now complete for those segments, except for some subroutines. ICPRB contracted with the USGS West Virginia District Office for the second of the necessary two time-of-travel studies (at both low and near average flow conditions) on the Potomac South Branch early in the year. The data from that study currently are being organized. Late in the fiscal year, thanks to a \$12,000 grant supplement from EPA, ICPRB was able to provide the necessary matching funds to the USGS Md.-Va. District Office for the first of two time-of-travel studies on the Shenandoah River. The second study and data interpretation remains to be financed. ICPRB's share will be \$23,000 with USGS providing an equal amount under its matching program in FY 1984. Staff is searching for sources to fund the ICPRB share.

Staff provided assistance to the Washington Area Waterfront Action Group (WAWAG) and its fishing committee for water quality and related activities, especially for the annual Potomac fishing clinic and week-long fishing derby in June; provided assistance and coordination in the preparation of state reports for the States Evaluation of Progress in the Clean Water Program 1972-82 (STEP) conducted by the Association of State and Interstate Water Pollution Control Administrators; assisted with special state monitoring and evaluations on the Potomac due to the unanticipated prolific algae blooms; developed procedures for accessing the USGS WATSTORE computer data base in addition to the EPA STORET; participated in an EPA Standing Work Group for development of new national guidelines for water quality monitoring and waste load allocations due for publication in the fall of 1983; and responded to numerous inquiries about water quality related subjects from throughout the basin.

Basin and Interstate Planning Assistance

Water Quality

- During 1983 the ICPRB Instream Flow Committee (IFC) contributed substantially to improved management of water quality and related resources in the upper Potomac Basin. As a result of discussions between the IFC Savage River Subcommittee and the Baltimore District of the Corps of Engineers (COE), a new release policy has been developed for Savage River Dam which vastly improves water temperatures and fishery habitat in the Savage River. In particular the new management strategy prevents wide temperature swings in the river below the dam. Recent fish sampling indicates good survival of brook, brown, and rainbow trout below the dam.

Also, in part because of IFC efforts progress, has been made toward coordinating the fishery management program of Maryland and West Virginia in Bloomington Lake and the North Branch. Substantial fish stocking has taken place, and due to the unexpected good quality of the water behind the dam, an excellent fishery seems to be developing in the lake. This has led to a problem of legal jurisdiction over regulation of recreators. ICPRB is attempting to clarify this problem amicably in cooperation with the COE, Maryland and West Virginia.

During the June meeting IFC members examined biota and habitat below Bloomington Dam. Food organisms for fish were still scarce at that time however some large fish were

sighted. Small fish were stocked below the dam and according to recent reports seem to be surviving.

The IFC also investigated the recreational potential of the North Branch from Bloomington Dam to Luke, Maryland, and encouraged the COE to provide for releases for white water rafting and boating when possible. The IFC is beginning to move the focus of their activities downstream to the area around Cumberland. Pulsed, flushing releases from Bloomington Dam may be useful in improving water quality and habitat in that stretch of the river by removing the fine materials which settle on the river bottom and interfere with benthic organisms. A report by the COE on the effect of these releases is due at the next IFC meeting in the early fall.

- During the year staff began work on an investigation of the relationship of water temperature and river flow with dissolved oxygen in the upper Potomac estuary, and of the implications of this relationship for operating wastewater treatment nitrification processes. The project will be finished in late fall 1983. Problems with software in our computer have caused the delays in finishing this research. One of the computer problems has been adapting the Potomac Eutrophication Model (PEM) to run on our computer. When PEM is operational on our computer it will be useful, not only for this current work, but also for future research on estuarine water quality problems and for example, the influence of meteorological conditions. The latter may be a factor in the unexpected prolific algae blooms in the summer of 1983 referred to previously.
- The State/EPA Management Committee for Potomac Strategy, of which ICPRB is a member, designated ICPRB as the Secretariat of the newly constituted Technical Subcommittee. The Subcommittee (formerly the Ad Hoc Committee to Review Potomac Estuary Models) considered and provided advice on correction of problems with the EPA Dynamic Estuary Model (DEM), the interaction of the Virginia embayment models under development by the State Water Control Board and the Potomac Eutrophication Model (PEM), and the technical aspects of future regulatory decisions. The parent Potomac Strategy Committee met most recently in September to assess the previously mentioned prolific algae blooms in the estuary, the preliminary results of the intensified monitoring efforts, effectiveness of current wastewater treatment operations, and the progress of current planning activities, e.g., future treatment capacity needs, chlorine residual reductions in treatment plant effluents, and future sludge disposal options.
- Staff developed a cost analysis for abandoned mine reclamation and acid drainage control in three West Virginia Potomac North Branch watersheds. Study plans were developed for re-evaluation of the North Branch mine drainage pollution problems in the light of recently observed improvements in acid conditions, and for modeling chemical conditions and interactions in Bloomington Lake and upstream as a basis for possible improvements in lake management. The recreational potential of the area has vastly increased (see previous IFC activities). This is expected to enhance justification for allocation of monies from the U.S. Dept. of Interior mine reclamation fund to the highest priority watersheds once they are properly identified. Commissioners and others from West Virginia have been helping with these activities.

- Late in the year staff started preliminary work on a project to integrate wastewater effluent and permit information with receiving water flow and quality data using the EPA STORET and PCS (Permit Compliance System) data bases along with other data sources. EPA approved additional grant funds to ICPRB in September so that data can be retrieved from the PCS for the project, which will continue through the next fiscal year.
- Another new project just getting underway and continuing into the next fiscal year is an investigation into the appropriateness of water and sewer rates in rural communities. Water supply quantity and quality, and wastewater treatment effectiveness and effluent quality occasionally suffer because of inadequate or poorly maintained facilities and equipment. Insufficiency of revenue is being investigated as a primary cause of the problem.

Other Water Resources

- Comments from the Virginia State Water Control Board (VSWCB) and the Virginia Polytechnic Institute and State University (VPI & SU) were incorporated into the ICPRB report on supplemental irrigation in the Shenandoah Valley. It is now completed and available for reference.
- (Also see CO-OP Annual Report for FY 1983)

Public Education and Information

Meetings

- ICPRB held the 1982 Fall Public Meeting on November 4-5, 1982. The meeting, "The Potomac in Washington: Recovery, Reflection, and Future Role," took place in the District of Columbia, on the Van Ness Campus of the University of the District of Columbia. A tour of the Blue Plains Wastewater Treatment Plant and a Potomac boat trip followed the meeting. Some two hundred people participated in the two days' activities.
- The Commission elected at its March 1983 business meeting that ICPRB should participate in the December 1983 Chesapeake Bay Conference as a co-sponsor. This effort represents the Commission's normal Fall Public Meeting commitment. Included in the ICPRB participation are membership on the conference planning committee, specific contributions to conference publications and publicity efforts, and conference promotion through pre-conference issues of the REPORTER.

Publications

- ICPRB published eight issues of the Potomac Basin REPORTER during the year. The highly popular newsletter is still distributed free to some 8,500 subscribers. The mailing list has been transferred from the Cromenco to the Fortune computer, which allows us to run off the labels in one-fourth the time.
- The 1980-81 Water Quality Report published in December is the first of these periodic reports to be produced after the critical review and evaluation of the format by the Commission. A special REPORTER issue for October-December 1982 summarized the report for the general public.

- Preparation for the new 16-page publication, "The Potomac in Washington," took place during this period. This publication, similar to "Issues for the 1980s," follows upon the 1982 Fall Public Meeting. It will be published in the late fall of 1983.
- The Commission sold approximately 1,290 publications, 75% of which have been split evenly between Potomac poster/maps and C&O Canal map sets. We continue to promote ICPRB publications through announcements, publication lists in the REPORTER, and the distribution of publication lists to libraries, institutions, festivals, etc.

Other

- The 1983 Potomac River Watch ran from June to September. River Watch provided weekend reports on river conditions to nineteen radio stations plus the Associated Press. Nine reliable volunteer river watchers assisted staff by providing information for the programs' sixth year.
- Reorganization of the library was completed, with some 2,600 volumes having been recatalogued using a new and more efficient system.
- Staff manned several Potomac exhibits and festivals over the spring/summer months (Alexandria, District of Columbia, Rock Creek, Accocek, Riverbend Park, etc.). One of the best ways to reach the public, the festivals allowed the staff to talk with or sell publications to an estimated 500 people.
- Staff participated in Washington Area Waterfront Action Group (WAWAG) activities, and was specifically responsible for organizing an Anacostia Park field trip. It promoted the need for and value of water quality improvements and the potential enhancement of the Anacostia River and shoreline.
- Answering Potomac queries from the general public and media continues to be an important function. Media interest is particularly high during the late spring/summer months.

Interstate Commission on the Potomac River Basin
Cooperative Water Supply Operations on the Potomac (CO-OP)

Director's Annual Report
Fiscal 1983

Fiscal 1983 was the first full year of CO-OP operation. It was marked by formalizing operating procedures and improving techniques.

Operational Forecasting

1983 was an excellent year for testing the capabilities of the NWSRFS on the Potomac. Heavy rains during the spring led to a forecast of extremely low probability of low streamflow in May. Despite near record dry conditions throughout the basin since mid June, that forecast has held. Streamflow has fallen slowly throughout the summer, but remained well above drought levels. It was not until August 15 that flows at Point of Rocks fell below 2000 cfs, the trigger point for initiating record keeping activities under the CO-OP operations manual. Flows at the end of August remained above 1200 mgd at Little Falls. The latest water supply outlook is attached to this report.

The NWSRFS has been installed in part on the CO-OP computer. This will allow CO-OP to do inflow forecasts for the individual reservoirs. Basin-wide forecasting will continue to be done on the NWS mainframes.

Operations with the NWS are proceeding quite smoothly. CO-OP is continuing to assist NWS with the development of version V of the NWSRFS scheduled for release in spring 1984.

Drought Exercises

Two drought exercises were held during the fiscal year, the first in October and the second in August. Both achieved the objective of exercising the operating procedures, and have or will lead to improved operations. The first exercise resulted in four recommendations: 1) Avoid purchase of future storage in Bloomington if at all possible, 2) Maintain instream flows above minimums on an hourly rather than daily basis, 3) Further investigate time of travel for releases, and 4) Improve the demand model. All four figured prominently in the second rehearsal.

Attempts to reduce use of Bloomington water during the August exercise led to the realization that formal cost sharing arrangements for purchase of Lake Manasas water and additional pumping from Little Falls were required. This issue has yet to be resolved. Because the August rehearsal used actual demands for the two week period, hourly pumping data was collected for each utility. Preliminary analysis of this data indicates that maintaining instream flows above minimums on an hourly basis will not be a problem. Further, the daily demand forecaster was tested against the actual demands during the exercise. Its forecasts were compared to those made by the operators based on their own models and experience. While the new demand forecaster performed well, it substantially underestimated the record high area demands that occurred the weekend of August 20-21. The operators were better at forecasting those extremes. The exercise showed the value of the operators forecasts to efficient system operation.

Completion of Technical Manuals

The CO-OP technical manuals were completed and reviewed by the Operations Committee during the year. In addition CO-OP began training utility personnel in the use and maintenance of the CO-OP models and procedures.

Installation and Testing of CO-OP Computer

Installation of the computer was not without problems. Poor operating system performance led to the development of substitute arithmetic software by CO-OP and ICPRB staff. The improvement in performance using these routines is greater than 10X, and makes runs of large analytical programs feasible. The computer is now installed and working well. We have need for an uninterruptable power supply to prevent system crashes during electrical storms. The first supply we purchased did not work with the system. It has been returned; we are pursuing alternative supplies.

Demand Modeling

As described above, the new demand model has been completed and tested during the August drought exercise. Demand forecasting remains the weak link in operations. We will strive to further improve our demand forecasting capability.

Performance Analysis of NWSRFS

The capabilities of the NWSRFS have been established in both flood and low flow forecasting. NWSRFS forecasts of spring 1983 floods were as good as the forecasts made using manual techniques, even though the manual techniques used more information on then current flows. This is most encouraging in that it will provide further incentive for the Harrisburg River Forecast Center to provide the necessary care and feeding of NWSRFS. This summer's experience with the forecast model has been documented above.

Install NWSRFS on the CO-OP Computer

Portions of the NWSRFS have been installed on the CO-OP computer. CO-OP now has the capability to run long-term inflow forecasts for the reservoirs in-house. This will allow us to implement the dynamic flood control water supply operations of reservoirs should the results of the next task make it seem desirable.

Investigation of Dynamic Flood Control Water Supply Operations

Investigation of the effect of soil moisture on flood flows on the North Branch indicates the potential for modest increases in water supply performance and substantial increases in effective flood storage and Bloomington. This work will continue in FY 1984.

Improved Weather Forecast Models

Little of significance has been accomplished in this area. A theoretically satisfying and yet practical means of incorporating real-time precipitation forecast inflow forecasts remains elusive. Work in this area will continue in FY 1984.

Joint National Weather Service -- ICPRB CO-OP
Washington Metropolitan Area
Water Supply Outlook

The water supply outlook for the Washington Metropolitan Area remains excellent. Flow in the Potomac River at Point of Rocks on August 30 was approximately 1500 cfs (which translates to approximately 1150 mgd at Little Falls) and declining slowly. If rainfall during September is unusually low (comparable to the minimum historical September rainfall of 1951, for example), Potomac River flow at Little Falls will decline to approximately 800 mgd by the end of September. If dry conditions persist into October the recession of Potomac River streamflow will become extremely slow; it has actually been observed that streamflow increases gradually during extended dry periods in October and November (1963 is a notable example). This feature is due largely to marked decrease in transpiration requirements of plants. The probability of Potomac River flow at Little Falls dropping below 700, 800, 900, and 1000 mgd over the period August 30 to September 30 have been estimated using the Extended Streamflow Prediction component of the National Weather Service River Forecast System ("Conditional Probability of Lower Flow"). Estimates based solely on historical streamflow are listed under "Historical Probability of Lower Flow".

The results are as follows:

Water Supply Outlook
August 31, 1983

Flow (mgd)	Conditional Probability of Lower Flow	Historical Probability of Lower Flow
700	.01	.20
800	.02	.29
900	.07	.39
1000	.30	.49

It would take rainfall below the historical minimum of the preceding 30 years to require the use of Bloomington water supply storage this summer or fall.

An update of this forecast will be issued in mid-September.

SUBCOMMITTEE RECESS

Senator ABDNOR. With that, the subcommittee will stand in recess until 2 p.m. Wednesday, February 29.

[Whereupon, at 11:20 a.m. Tuesday, February 21, the subcommittee was recessed to reconvene at 2 p.m. Wednesday, February 29.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1985

WEDNESDAY, FEBRUARY 29, 1984

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2:19 p.m. in room SD-192, Dirksen Senate Office Building, Hon. Mark O. Hatfield (chairman) presiding.

Present: Senators Hatfield, Stennis, and Sasser.

TENNESSEE VALLEY AUTHORITY

STATEMENT OF CHARLES H. DEAN, JR., CHAIRMAN

ACCOMPANIED BY:

S. DAVID FREEMAN, DIRECTOR

RICHARD M. FREEMAN, DIRECTOR

WILLIAM F. WILLIS, GENERAL MANAGER

Chairman HATFIELD. The hearing will please come to order. Today, we are pleased to welcome to the committee Chairman Charles H. Dean, Jr., and Directors S. David Freeman and Richard M. Freeman, who constitute the board of directors of the Tennessee Valley Authority.

Chairman Dean and TVA's general manager, Mr. Willis, will outline the TVA's budget request for fiscal year 1985.

TRIBUTE TO S. DAVID FREEMAN

But before we proceed, I want to make note that this is the final appearance of David Freeman before the committee as a member of the TVA board of directors. His term will expire in May of this year.

Some of the members may not recall that you joined the TVA in May 1977, Mr. Freeman, and in May 1978, President Carter designated Mr. Freeman as chairman of the TVA board, and he served in that capacity until June 1981.

During your 7 years as a board member, the Tennessee Valley Authority has undergone major changes, and, to a great extent, you provided the leadership necessary to make those changes and to transform TVA into a more responsive organization. Throughout this period, TVA maintained its commitment to the people of the Tennessee Valley region by reducing costs and keeping power rates as stable as possible.

Yet even while managing a multibillion dollar power program, you

never lost sight of the fact that the long-term prosperity of the valley region was directly related to the priority and attention given to the basic skills and education of its people; that increased investment in the human resource was the underpinning of the economic future of the valley.

You have served this Nation well in both the legislative and executive branches of the government and also through your work at the Tennessee Valley Authority.

It has been a pleasure to work with you over the years, and we wish you and your family success in your future endeavors.

Senator STENNIS, Senator SASSER?

Senator STENNIS. Mr. Chairman, I won't take up time now except I do want to join in your sentiments here about Mr. Freeman, David Freeman, and his work. I remember so well when he came to the Authority. Time was somewhat uncertain and change was going on. He faced some difficult matters, but he made decisions and has done well. I want to thank him.

Chairman HATFIELD. Thank you, Senator Stennis.

Senator SASSER. Mr. Chairman?

Chairman HATFIELD. Senator Sasser?

Senator SASSER. Mr. Chairman, I want to echo the comments that the distinguished chairman has made here today regarding David Freeman's service on the TVA board and those comments made by my able friend and colleague, Senator Stennis.

David Freeman did come to the TVA at a time, I think, of great turmoil and great turbulence and at a time when, perhaps, there were corrections that needed to be made which were long overdue. David Freeman had the courage to make those corrections.

I think it is well known, Mr. Chairman, that Mr. Freeman and I did not always agree on every issue, but I have a high regard for David Freeman's sincerity, his dedication, and his competence, and he has been a dedicated public servant in service to the people of the Tennessee Valley area and, indeed, the whole Nation.

During his tenure on the board and as chairman and as a board member, TVA has moved into the forefront of energy conservation. I well remember when it was a source of some embarrassment and perhaps some chagrin that the Tennessee Valley Authority had gotten itself into a posture where the Environmental Protection Agency was contemplating filing suit in an effort to make TVA comply with the law of the land, and under David Freeman's leadership, the TVA has moved from that posture to now becoming one of the leaders, in fact, the leader in the electrical generating industry, in pushing for clean air and cleaning up of the pollutants that are emitted by their coal-fired plants.

So the years that David Freeman has served at TVA have been significant years for that distinguished agency, and he has followed in the footsteps of his able predecessors, and I would just like to say to Mr. Freeman today, Mr. Chairman, with your permission, that we very much appreciate his years of service and appreciate the job that he has

done on behalf of the Tennessee Valley Authority and on behalf of the citizens of the valley and, indeed, the citizens of this Nation.

Chairman HATFIELD. Thank you, Senator Sasser.

Senator SASSER. Thank you.

Mr. DAVID FREEMAN. Mr. Chairman, could I respond very briefly by expressing my thanks for those comments, and also expressing a very deep feeling I have that this committee has provided such unswerving support for the Tennessee Valley Authority over a 50-year period that any success that we have achieved is directly attributable to your support, Mr. Chairman, and the support of the Senators that have made up this committee.

It has been a remarkable partnership for the benefit of the people that I think is benefitting the entire Nation. I would just like to add one other thought: The first thing that a TVA board member must learn is to count to two. Nothing in TVA has been done by me alone, and it has taken at least two members of the board, equal in their authority, to implement any of the actions that have been taken.

Thank you, sir.

Chairman HATFIELD. Thank you, Mr. Freeman.

Now we will proceed to the statement of Chairman Dean. We are very happy to welcome you and Mr. Richard Freeman to our hearing today, along with Mr. Willis.

You may proceed either to summarize or highlight your testimony as you may wish. We will place the entire written statement in the record. When you have finished, then, do you wish Mr. Willis then to follow with some statement, or shall we go to questions?

Mr. DEAN. I have a short statement myself, Mr. Chairman, and then Mr. Willis has some amplification.

Chairman HATFIELD. All right.

Mr. DEAN. These are all abbreviated versions of the full statement for the record of TVA.

Chairman HATFIELD. We are happy to have you here this afternoon. Please proceed.

BUDGET OVERVIEW

Mr. DEAN. We are pleased to be here to outline our budget request of \$117.5 million. Some of the figures are over there on the chart.

As TVA is beginning its second half century, we reaffirm to this subcommittee TVA's commitment to effectively serve the Tennessee Valley region and the Nation through new technologies and new approaches for achieving integrated resource development and economic growth.

The technical assistance which comprises a significant portion of this budget program for 1985 can be characterized as TVA helping put the valley's resources, farms, and people back to work.

Our activities do not duplicate services offered in the private sector or those provided by other agencies. We play a complementary role to ensure that the most significant gaps are filled. Indeed, our efforts normally involve a cooperative arrangement with other entities.

TVA continues to improve its internal management and planning to ensure maximum return on the Federal dollars invested. Linking business management practices to the Federal budget process is not always easy, but the efficiency which can be achieved is worth the effort.

TVA's budget request of \$117.5 million for 1985 compares to an appropriation of \$125.5 million for 1984. The 1985 request is slightly lower than last year, but it is basically a continuation of the 1984 level for the operational components of TVA's programs as contrasted with the capital part.

TVA's general manager, Mr. Willis on my right, will present details of the budget request. Before that, there are several specific areas we would like to mention.

OCOEE DAM NO. 2 RECREATIONAL WATER RELEASES

Mr. Chairman, a recent TVA and State of Tennessee agreement provides for recreational releases of water from Ocoee No. 2 for the next 35 years. The first release is scheduled for March 24. Congress has appropriated funds which, combined with consideration provided by the State of Tennessee, will compensate the TVA power system for the increased costs of recreational releases on 116 days per year during times of heaviest use. Consistent with the direction of Congress, we will also have arrangements in place by March 24 for collecting fees from commercial outfitters to reimburse the Treasury for these appropriations.

UNOBLIGATED CARRYOVER BALANCES

We would like now to briefly discuss TVA's unobligated balance which existed at the end of 1983. The Congress has consistently appropriated TVA funds on a no-year basis. This recognizes the problems inherent in estimating expenditures for construction of large capital projects. It also eliminates the motivation for unwise yearend spending.

Last year we reported to this subcommittee that we expected our carry-forward into 1984 to be as much as \$100 million. It was actually \$113.5 million. If we exclude the \$47 million which the administration deferred to partially fund our 1984 program, TVA's unobligated balance was approximately \$66 million, \$60 million of which was derived from specific capital projects, particularly our coal gasification project in north Alabama, Columbia Dam, and Pickwick lock. We believe this level of unobligated balance, given the special circumstances surrounding most of it, is a reasonable amount.

The new lock at Pickwick Landing Dam experienced a significant underrun in 1983. Due to increased productivity by the construction forces and the reduction of our contingency funds, the project will be completed some \$20 million under its last reported cost estimate and on schedule. TVA has recommended deferring \$2.2 million of these savings into 1985 to finance other planned activities and reduce TVA's 1985 new appropriations request to \$115.3 million. We have deferred an additional \$7 million from 1984 to 1985 to complete the Pickwick project without additional appropriated money. This is an accomplishment of which TVA is quite proud.

ELECTRIC POWER RATES

TVA's customers still enjoy the electric power rate stability that we talked about last year. Actual bills to customers on the TVA system in 1984 are at about the same level as they were in October 1982.

In today's power market, with its demand and regulatory uncertainties, flexibility is essential. Flexibility is not possible without a vigorous research and development program, and TVA has one.

ATMOSPHERIC FLUIDIZED-BED COMBUSTION PLANT

We are particularly excited, all of us, about the atmospheric fluidized-bed combustion demonstration plant that will be constructed at our Shawnee steam plant in Paducah, Ky. Our partners will be the Electric Power Research Institute, the State of Kentucky, and Duke Power Co., and substantial funds have been committed by the Congress—\$30 million—and private sources.

We will show that this technology will allow the generation of electricity at competitive costs and in compliance with tough atmospheric emissions standards. An additional benefit is that it allows the use of high-sulfur coal without expensive flue gas scrubbers.

I might say that the funds needed to build this project have been essentially secured, so the project is ongoing.

Mr. Chairman, Dave Freeman would like to make a few comments before Mr. Willis outlines the details of our budget request.

STATEMENT OF S. DAVID FREEMAN

Mr. DAVID FREEMAN. Mr. Chairman, since this is my last appearance, I would like your indulgence for just a very few moments to make some remarks that I would like to address to the committee. I believe that there are three initiatives which TVA has underway that hold the greatest promise for the future. We are all enthusiastic about TVA's initiatives in training and education. We are already demonstrating that investments in human beings who want to work but don't have the needed skills can pay dividends for the Nation as great as 10 to 1. There is no better investment for the Federal Government, in my opinion, than to take people off the welfare rolls and put them on the payrolls.

SOIL CONSERVATION EFFORTS

A second item is soil conservation. It is part of the heart and soul of TVA, and nothing is more vital to the welfare of this Nation. Each generation, apparently, must learn the lesson that if we abuse the soil, we lose it. We have initiated programs in no-till farming and other such demonstrations to save our soil. These programs merit your support and they will require a stronger effort in the years ahead.

It is a sad fact, Mr. Chairman, that this Nation has pledged to use military force to protect the oil supplies of the Middle East. Indeed, lives have already been lost in an involvement in Lebanon that cannot be disassociated from our oil dependency. Yet the urgency for achieving energy self-sufficiency is sadly lacking.

ENERGY CONSERVATION

Conservation is, of course, our best means of reducing oil imports, but we also need alternative sources of supply. TVA has two important such initiatives underway: the commercial size coal-to-methanol plant in north Alabama, and the wood-to-methanol project in Muscle Shoals. In my view, these projects are vital to the Nation's security, and should be considered as part of our defense budget if such consideration will help get them funded.

Mr. Chairman, in my view, this Nation continues to overspend and underinvest in the human and natural resources that will make or break us in the years ahead. We will never be secure or prosperous if we don't make investments in cleaner and longer lasting energy sources and preserving our soil and air and water and in the skills of our people.

The country badly needs real demonstrations of how to do it. TVA has demonstrations underway in all these areas.

The Tennessee Valley Authority's capacity for highly productive investments is grossly underutilized, while the spending programs continue. Our job training efforts are a good example of investments that are inadequate while the Nation's welfare bill mounts. Over time, in my view, investments in energy self-sufficiency and the brain power of our people will do more for America's security than nuclear weapons systems that will add to an overkill which only a madman would use.

A private company that fails to distinguish between beneficial investments and wasteful expenses would go broke, and if we don't wake up, so will America.

This committee sits as a board of directors making priorities for the Nation and the allocation of Federal funds. My final plea to the committee is to put the full capability of TVA to work for the people by reallocating some of the wasteful spending to investments by TVA that will contribute to our survival, our prosperity, and our happiness in the years to come.

Thank you, sir.

Chairman HATFIELD. Thank you, Mr. Freeman.

Mr. Richard Freeman, do you have any comments you would like to make?

Mr. RICHARD FREEMAN. I wouldn't add anything to that very eloquent statement, Mr. Chairman.

Chairman HATFIELD. Thank you, Mr. Freeman.

Mr. Willis?

SPECIFIC PROGRAM REQUEST FOR 1985

Mr. WILLIS. Mr. Chairman, TVA's budget request for its natural resources programs in 1985 totals \$48.1 million, compared to \$60 million appropriated for 1984. Our request for economic and community resources activities totals \$14.8 million, compared to \$16.3 million appropriated for 1984. Both of these programs emphasize a long-time TVA theme with new significance in today's world: putting people and resources back to work. Equally important is our concern that develop-

ment can and must be achieved in an environmentally sensitive manner. Integrated resource management and development is the vehicle TVA uses to foster that result.

NEW PROGRAM INITIATIVES

This integrated approach is evident throughout our budget request. Examples include our new initiatives responsive to problems of water quality and quantity—key factors in economic development, as well as environmental problems that must be addressed. In one of them we will try new techniques in nonpoint pollution management for tributary streams. Activities will be aimed at controlling sources such as soil erosion from agriculture and abandoned strip mines.

In a second new initiative, we will demonstrate methods to improve local water system efficiency and effectiveness in areas with recurring water shortages. We will emphasize water conservation, the development of ground water, and its use in conjunction with surface supply. Finally, we will promote regionalization as a replacement for small, inefficient supply systems.

Progress in our efforts to improve the quality of water released from TVA dams continues. We propose to begin implementing the results of our research at selected locations including Norris Dam, South Holston, Chatuge, and others. We are initiating dam safety modifications at two locations to conform with revised Federal standards for new dams.

We have a video tape covering the operation, problems, and opportunities in the management of our reservoir system. This tape exemplifies TVA's integrated approach to resource management and some of the environmental issues the agency is confronting.

Please direct your attention to the monitor.

[Whereupon, a videotape was shown to the committee.]

FORESTRY PROGRAMS

Mr. WILLIS. In our forestry program, we are focusing our efforts on developing markets for existing valley hardwoods as a way to improve their long-term quality and quantity and improve opportunities for economic growth. We will accomplish this by commercializing several new products developed by the U.S. Forest Service research laboratories. We will attempt to establish and expand new forest products industry in the valley and we will explore the opportunity to increase exports of valley forest products.

In our existing industries program, we are providing technical assistance that helps current valley industry expand or operate more efficiently. This assistance includes energy conservation, transportation cost reduction, financial planning, and employee training.

Our regional solid waste efforts will aid in solving these important local concerns. Our newest effort is aimed at better grasping the options available for dealing with a major valley problem, hazardous wastes, in cooperation with local governments, industries, environmental groups, and the States.

We plan to continue other fundamental and needed efforts like our special opportunities counties and cities. Through this program, TVA brings a unified approach to developing long-term patterns of economic self-sufficiency in the most economically depressed areas of the valley.

AGRICULTURAL RESOURCE PROGRAMS

The 1985 appropriations budget request of about \$5.5 million for the agricultural resources development program will provide a fairly constant level of activity compared to 1984. Business decisions for today's farmers are much different from those in years past. TVA is placing more emphasis on introducing high-income enterprises on small farms. Choices between specific enterprises and locations must be coupled with a more sophisticated financial planning strategy in order to maximize profit. For the small farmer in the Tennessee Valley, this will frequently mean the difference between survival and bankruptcy.

TVA is providing total farm management assistance to rapid adjustment and resource management farms to demonstrate that with the proper planning and use of resources, small farmers can survive and contribute to the economy.

In a related self-help effort, TVA provides low-income families with no more than \$35 per family in seeds, plants, fertilizer, and pesticides from which a garden valued at some \$500 can be grown. As you can see from this video tape, these various demonstrations offer an accessible and responsive way to increase income and improve nutrition of low-income, elderly, and unemployed persons.

[Whereupon, a videotape was shown to the committee.]

NATIONAL FERTILIZER DEVELOPMENT PROGRAMS

Mr. WILLIS. Our 1985 budget request of \$45.8 million for the national fertilizer development program will continue most programs at about the same level as in 1984.

The national fertilizer research and development program will continue progress toward improving efficiency, conserving energy and nutrients, and developing new fertilizer materials and processes.

Chemical facilities represent the capital investment necessary to develop pilot-scale plants which simulate commercial fertilizer manufacturing operations. These facilities are necessary to confirm research findings. Because of the nature of R&D work, this program must be flexible. At times TVA must reassess the priority of projects. Due to recent significant changes in market conditions, for example, TVA has decided to delete some chemical facilities projects in 1984 which will affect the fiscal year 1985 request. Details of these changes have been provided to your staff, Mr. Chairman.

The national fertilizer technology introduction program will disseminate the most recent developments to the Nation's farmers through farm and industry demonstrations. TVA offsets the cost of technology introduction through the sale of experimental fertilizers.

We will complete the testing phase of the ammonia-from-coal program in 1985. TVA is satisfied that the technology has been successfully demonstrated and is pursuing outside funding for additional testing to maximize benefits from the facility.

HARDWOOD FUELS RESEARCH

Another important area of research at the fertilizer center, though not directly a part of the fertilizer development program, is hardwood fuels research. This program has advanced the technology sufficiently to warrant the design and construction of a pilot project to test results derived in the laboratory. This project will begin in 1984 and is scheduled to be completed in 1986 at a total cost of \$7.5 million. Project results will be used to design a continuous process which will be essential to attract industry to develop a commercial-scale facility.

The following videotape will acquaint you with the project and its significance for many regions of the United States.

[Whereupon, a videotape was shown to the committee.]

Mr. WILLIS. That concludes our presentation.

Chairman HATFIELD. Pardon?

Mr. WILLIS. This concludes our presentation. We will welcome any questions you have.

Chairman HATFIELD. Thank you.

With Senator Stennis' permission, I would like to yield to the Senator from Tennessee, Mr. Sasser, for the first questions, since this is pretty much in your constituency.

Is that agreeable, Senator Stennis, to let Senator Sasser go forward?

Senator STENNIS. Yes.

COLUMBIA DAM AND RESERVOIR

Senator SASSER. Thank you, Mr. Chairman. I appreciate that very much.

Let me say, Mr. Chairman, that I have a good feeling about TVA. In recent years, the recent months and years, rates have stabilized and reforms have been made in the coal procurement program; an independent audit and investigation office has been established; and in short, TVA has made some significant strides in the past few years.

But having said those things, Mr. Chairman, I have got to raise a matter here which I think is of some importance. This morning, I read in the morning newspaper in Nashville, Tenn., a report about testimony before the board yesterday before the House subcommittee. I was distressed to read the headline entitled, "TVA Won't Push Columbia Dam." The board was quoted as saying, and I quote, "We have not in the past asked for money to complete the dam and doubt that it fits our priorities."

I would like to take this opportunity to remind the board members of TVA that we have a joint responsibility about that dam, the board and the Congress. The Columbia Dam project was approved by another board years ago, in 1969, and during the ensuing years, over \$100 mil-

lion has been obligated by the Tennessee Valley Authority for this project.

The TVA board has, indeed, in the past supported Columbia Dam and proposed appropriations for its completion. Furthermore, TVA has entered into contractual agreements with the citizens of the area affected by the dam which require those citizens to pay up to \$16 million in their assessment levied against them on their water bills toward completion of the project.

So the Tennessee Valley Authority board has a record of support for the Columbia Dam project; it hasn't been until recent years that the board has failed, in my opinion, at least, to move forward.

Now, these statements that were made or attributed to the board in the morning newspapers, if they were correct, could be construed by the people to be served by this dam as a breach of faith, and this TVA board must honor its responsibilities, and it must fulfill its contractual commitments and continue to deal in good faith on the Columbia Dam project.

Prior to the TVA's submittal of a 1985 budget for review by the Office of Management and Budget last year, I advised the board through unofficial channels that I expected TVA to honor its commitment and request funding for the completion of Columbia Dam.

Until yesterday, I had assumed that the board had requested those funds, or TVA had, and that those funds had been depleted by our good friend David Stockman over at OMB before the TVA budget was submitted to Congress.

ENDANGERED SPECIES PROBLEM

But apparently I was wrong about that. Apparently, the board failed to request these funds, and I was astonished to deduce that. The board placed the Columbia Dam under construction several years ago, and completion of the dam has been held up by the discovery 3 years ago of a mussel on the endangered species list.

The Columbia Dam was initiated and was under construction prior to the enactment of the Endangered Species Act. I had thought that every effort was being made to comply with the Endangered Species Act and solve the mussel problem.

The TVA and the Fish and Wildlife Service developed a mussel conservation plan to transplant the endangered mussels to another habitat. It is my information that the reproductive success of the mussels was far higher than the goal agreed to between TVA and the Fish and Wildlife Service, and at the North Fork Holston site there was a 70 percent survival rate, which is 20 percent higher than the goal established between TVA and the Fish and Wildlife Service.

I have been willing to give TVA the time it needed to successfully complete the mussel protection program, and I think most supporters of this dam project have been also. But I am beginning to wonder if TVA is acting in good faith on the mussel protection program.

Mr. Chairman, I regret that this sounds suspiciously like a lecture, but perhaps it is time the board gets a lecture on this particular subject. The completion of Columbia Dam will be achieved by the support of the TVA board and supporters of the Columbia Dam project, and the House of Representatives and the Senate will not be able to muster support for completion of this project as long as the board opposes it.

There was a commitment from the board to complete the Columbia Dam project, and gentlemen, I hope that you will go forward together now and complete this Columbia Dam project and cooperate with the Congress, and let's all honor our joint commitments to the people of this area.

Mr. Chairman, I have other questions, but I will defer now to the chairman and the distinguished ranking member.

Thank you.

Chairman HATFIELD. Senator Sasser, would you like a response to your observations and comments?

Senator SASSER. Yes, I would.

Mr. RICHARD FREEMAN. I will be glad to try to clarify where we are with respect to Columbia Dam, and my colleagues may wish to do so, as well. We did enter into an agreement with the Fish and Wildlife Service a few years ago that called for a conservation program of the mussel. That program was to be concluded about now.

We have entered into discussions with the Fish and Wildlife Service in which we have shared with them the results from that program. In those discussions, in the communications, the position being taken by the Fish and Wildlife Service is that additional work which will take some time and will cost something like \$8 to \$10 million may be required before we can demonstrate to the satisfaction of the Fish and Wildlife Service that the program is likely to be successful.

The question before us and the committee is whether or not we should go forward and request some additional \$8 million for that purpose, because there is not money available in the budget for Columbia Dam. Completion of the dam and the conservation program will cost something like \$160 million. As you can see by looking at that chart, we have been given a ceiling by OMB of \$117.5 million. We have been told that in the next few years, our ceiling will be in that neighborhood. It is very difficult to fit into that kind of a ceiling a project that would cost \$160 million. So that is our dilemma as we face the decision, and as we share with you the facts with respect to Columbia Dam.

In essence, this is what we told the House committee yesterday in response to questions from Congressman Boner.

Chairman HATFIELD. Thank you.

Senator SASSER. Mr. Chairman, I would just comment that we are not asking; we don't need \$160 million at one fell swoop. We are talking about construction over a period of time.

Mr. RICHARD FREEMAN. Over 3 to 4 years. It would be something in the neighborhood of \$30 to \$40 million a year, which is a little difficult to accommodate in our limited appropriations.

Senator SASSER. I understand that the Tennessee Valley Authority is operating under rather severe fiscal restraints through this period of time. But my point is that I want the board to operate in good faith with the Congress on this particular project and to honor our commitment to the people of that area. I think that can be done if we do it together.

Chairman HATFIELD. Thank you, Senator.

Senator Stennis?

Senator STENNIS. Mr. Chairman, my interest is well known, and TVA has an authority as an institution as well as many of the individual programs that they have carried on, some in the broad field, they cost a lot of money, and some in smaller fields of research and development.

I remember the old program on fertilizer development, and they still are making a contribution in that field. I have some familiarity with forestry research and development in that area of the country, anyway, and I know their program in the field of forestry research has been of tremendous value.

SPECIAL OPPORTUNITIES COUNTIES AND CITIES

They have a relatively small program here for the poorest areas. I think it involves 50 counties, 50 counties in the area that are eligible wherein you are able to spend small amounts of money to enhance income levels and initiating the right kind of technical assistance and development capabilities, so that people can have those capabilities, and they go into various programs including the idea of initiating small income-producing projects or small joint industrial development work that will create payroll.

I submit, Mr. Chairman, that now there is nothing that we could think of—and this is not a new matter for TVA—there is nothing we could think of that could mean more real value and contribute to relieving us of the situation we are in financially in the Nation than something that creates jobs, creates jobs and more particularly, creates jobs back in areas where the people already live and where they are making a living and where improvement is needed on the large scale.

This comes slowly, like soil conservation, and reforestation of idle land or semi-idle land. I know by personal observation and the response on their part; they have a small project, very small like in my home county in east-central Mississippi—I have been there on the ground with them; talked to their men, and they are highly qualified. They are experienced. And they join hands with the local authorities. This is not a big money program. It is just nonmoney, by comparison, and leadership goes on to the planning assistance that they render, which is of tremendous value.

I have a few questions that go into this in more detail, but I won't take up time now of the subcommittee except to ask if I may have permission, though, and I request it, to submit these questions for the record and for response by whomever they choose in his position of responsibility.

I want it to be in our records here and I want it to be known by the public.

So if you would rule on that request, I will move to something else.

Mr. DEAN. Thank you for those kind words, Senator Stennis. We are glad that we are doing some good with that particular program. It is well received all over the valley.

Senator STENNIS. All right. Would it be all right to submit those?

Chairman HATFIELD. Certainly, Senator Stennis. Your questions will be made part of the record.

Senator STENNIS. On the matter of the money for this program that I have described, and this doesn't involve any large sum of money for any one area or county, but they only have \$2 million-plus in the budget request. I have the actual figure here somewhere. There, for the fiscal 1985 budget request, \$2,095,000. That is applied now to not all of the eligible counties, but to about one-half?

Mr. WILLIS. It is a little less than one-half; it is one-third.

Senator STENNIS. I guess you are free to make estimates of your own. Somebody made the estimate. This looks to me like it is a reduced figure. You might have made the estimate, somebody reduced it.

How much money can you spend with profit under your system of operation for this work?

Mr. WILLIS. Senator, we have programs underway in about 20 of the 50 very depressed counties and the \$2 million request supports about that level of effort. The \$2 million level is about what we have had in this program for the last 3 years.

To reach out and really get at those other 30 very depressed counties in the region it would take two to three times that much money.

Mr. DAVID FREEMAN. Senator Stennis, if I could just amplify that answer, I think the record should show the TVA board requested a \$10 million supplemental appropriation for this program which was denied by the Office of Management and Budget.

Senator STENNIS. All right, thank you. That is a contribution, and you gentlemen, you can't utilize all of this. I mean, you can't bring this service to all these communities and counties in 1 year, I judge. But you think that you could use \$10 million worth of it in 1 year; is that correct?

Mr. WILLIS. Yes, sir. We could use that much money if it were available.

Senator STENNIS. That is with the personnel and all that you already have engaged.

Mr. WILLIS. I think we have the capability of doing that, yes, sir.

Senator STENNIS. You think what?

Mr. WILLIS. We have the capability of doing that.

Senator STENNIS. Yes, capability. Well, everybody wants a little more money, and we here on the committee hear this all the time. That is one of the things we are here for, to move things around. Now, I come in contact with billions of dollars which is just pocket change in some of these appropriation bills we consider. [Laughter.]

I am strong for the military and all, but this weaponry is running out the top of the smokestacks, and we have items in these bills, one coming I don't want to frighten anybody, \$5 or \$6 billion for one weapons system. We have to have the weapons, some at least, but here is something here now that, as I said, it provides people jobs; it gives people jobs in the areas where they already live and already have their little homes, modest as they may be, and I think—I know, I know that we have neglected programs of this kind while we were trying to take care of everybody on the other side of the world, and I am not condemning all of those programs. But, Mr. Chairman, I want to serve notice now that I want to carefully work out from their testimony, their answering of these questions a larger sum than the budget calls for here above the \$2 million.

I want to submit it to this subcommittee for a recommendation. I call it to the special attention of you now. I have personal knowledge of how they operate and how they are fulfilling their mission in these fields, and this money goes as far, producing as much permanent good, lasting good, not just 1 year, but it puts in motion things that will last as any public dollars I know of in the entire budget.

I would be glad if these gentlemen would give any comment with reference to this program, how you plead with it, anything you want to say. I suppose there will be questions asked by others on your general operations where you may need to be tight on money.

About this program to which I especially referred, will you give special attention to these questions and the points that my questions raise as well as other points that are highly relevant and file it as part of your answer in this case? Will you do that?

Mr. DEAN. We certainly will, Senator. We recognize the fact that the area that we serve is still depressed as compared with the Nation as a whole, and this is one of the programs we have which is aimed at restoring the economic viability of the 201 counties we serve.

Senator STENNIS. All right. I thank you very much. Thank you, Mr. Chairman.

Mr. DAVID FREEMAN. If I could just add this comment from my own knowledge, just as Senator Stennis stated, we have been in these areas and seen them. One of the local officials said to me, "The Chase Manhattan Bank doesn't have any offices in this area. There is no source of investment capital to help make the investments for these areas to get started to become more productive." This is, I think, an example of a program that helps the very poorest counties in a part of the country that is still below the national average.

Many of these counties are about 50 percent or less of the national average in terms of incomes, and instead of simply throwing money at the problem, the TVA program makes investments that enable the counties to increase jobs and income. It is an example, I think, of how TVA's intimate knowledge of the area it serves enables it to function in partnership with the local agencies and the people to the benefit of the Nation and to provide, over time, tax-producing incomes that I think will pay benefits many fold directly to the Federal Treasury.

Senator STENNIS. Thank you, sir. Thank you.

That is all I have at this time, Mr. Chairman. Thank you.

Chairman HATFIELD. Thank you very much, Senator Stennis.

Senator Stennis, the special opportunities program to which you refer, of course, is part of their economic and community development portion of the budget, and there are other activities within that which reflect a different set of priorities. So I believe there is a possibility of moving some of that money around within that category to provide greater emphasis to these poorer counties.

Senator STENNIS. Yes, that is fine. That makes it more convenient, as well as forceful. Thank you very much.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY SENATOR STENNIS

SPECIAL OPPORTUNITIES COUNTIES AND CITIES

1. Question: Thank you, Chairman Dean and other members of the TVA Board of Directors for your fine testimony. As you know, I am very interested in and very aware of the work you are doing in the Tennessee Valley area. I have seen the results of the work you have done and are doing in Mississippi. One program which I am particularly interested in is your Special Opportunities Counties and Cities program. I am somewhat familiar with that program myself; but for the record and for the sake of those here who may not be familiar with the program, I wish you would explain it a little.

Answer: At least 50 Valley counties in the 201-county TVA region still lag far behind the rest of the Valley and the Nation in economic development. They are characterized by chronic high unemployment, low per capita income, and other poverty symptoms. In an effort to bring these counties up to parity with the rest of the Valley, the TVA has developed an innovative and creative demonstration that also holds the potential for nationwide application. It focuses on bringing a unified approach to bear on the myriad, and often historic, obstacles facing the poorer, less developed areas of the Tennessee Valley region.

The Special Opportunities Counties and Cities (SOCC) program concentrates on those efforts which can improve the economy of poor areas and emphasizes projects which create jobs and increase per capita income in these 50 worst counties. In addition, two urban areas and one special project (Eastern Band of Cherokee Indians) have been included. The four major criteria used to identify county target areas are: per capita income, percent of income derived from transfer payments, level of chronic unemployment, and percent of population employed. Projects are selected on a competitive basis.

The following facts about these counties are of particular interest:

- In 1983 the unemployment rate in SOCC-eligible counties averaged 16.4 percent with several counties exceeding a 25 percent unemployment rate.

- About 35 percent of the total personal income in these areas is derived from Federal Government transfer payments.
- The range of per capita income in these 50 counties is \$3,892 to \$6,394. The average was \$5,145 or only 54 percent of the national average per capita income.

2. Question: I understand that this program creates quite a few jobs in comparison to its cost. Is that true and do you have any facts to back it up?

Answer: In the recent 3-year history of the SOCC program there have been notable successes in attacking economic problems in the target areas.

Among them are:

- Over 3,000 new jobs directly created at an average SOCC program cost of \$3,000 per job.
- Five and one-half private dollars resulted from each SOCC dollar expended.
- Two and one-half dollars from local government invested for each SOCC dollar expended.
- Demonstrations in improved agricultural or forestry productivity with individuals and new cooperatives led directly or through subsequent replications to increased income for 500 farmers.

Among recent specific accomplishments:

- In Yancy County, North Carolina, a local industrial development association was assisted in the purchase of land which permitted a new industry to locate and create 500 new jobs.
- In DeKalb County, Alabama, an existing industry was assisted in developing an increased wastewater treatment facility that enabled it to create 35 new jobs.

- The county commission of Benton County, Mississippi, was able to secure an automobile transmission manufacturing firm when funds for road improvements, drainage facilities, and parking were provided at the industrial site. One hundred twenty-five new jobs were created.

3a. Question: How many of the 50 counties and areas that are eligible are currently participating in the program?

Answer: Twenty-nine of the 50 areas that meet SOCC criteria have been designated for SOCC program participation. Current funding permits comprehensive efforts in only 18 of these. In the remaining 11 areas limited efforts are being continued through technical assistance and in some instances financial assistance on single purpose projects. However, the SOCC goal of self-sufficiency is not likely in those 11 counties at TVA's current level of effort.

3b. Question: How many additional counties will be able to participate under your budget request?

Answer: The budget request of \$2.1 million for 1985 would not provide a net increase in the number of participating areas. The SOCC program depends upon building local initiative to follow through on project opportunities and upon the program's ability to stimulate additional funds to cover total project area financing needs. With fewer funds available in fiscal year 1985, expansion to new areas would be possible only as projects within current areas are completed or if projects develop more slowly than planned, thus freeing funds for new projects.

Additional funding of \$10 million would represent full program capability, allowing expansion into all 50 qualifying counties. At least \$50 million in additional private investment could be anticipated and over 3,000 jobs created. A wide range of innovative demonstrations would be possible, including the potential establishment of a revolving loan fund to perpetuate assistance needed in the years ahead.

There are a large number of pending and potential projects within SOCC-eligible areas. With additional funding of only \$4 million, more exten-

sive projects within both current and new areas could be implemented. An estimated 1,200 to 1,500 jobs could be created. Over \$20 million in additional private investment could be expected to result from these projects. Among the prime candidates for innovative approaches to job creation are an area from the eastern Valley Appalachian coal region, an area from the Georgia-North Carolina mountain counties, and new counties from Mississippi and west Tennessee.

4. Question: I will not ask you to name them now, but I would appreciate it if you would provide for the committee a list of all those counties which are eligible and those counties which are participating under current budget levels. Also I would like a list of those counties you expect to be able to participate next year.

Answer: The following list shows the 53 areas that are eligible for the SOCC program. The second list shows those 18 areas where comprehensive program efforts are currently underway. Within the fiscal year 1985 budget request of \$2.1 million, expansion to additional counties is unlikely at this time.

Counties Eligible For SOCC Participation

Alabama

De Kalb
Lawrence
Madison (Triana)

Georgia

Fannin
Rebun
Towns
Union

Kentucky

Butler
Cumberland
Edmondson
Grayson
Monroe
Todd
Whitley

Virginia

Lee

Mississippi

Attala
Benton
Calhoun
Choctaw
Kemper
Marshall
Noxubee
Panola
Tallahatchie
Winston
Yalobusha

North Carolina

Avery
Cherokee
Clay
Yancey

Tennessee

Bledsoe
Campbell
Claiborne
Cooke
Cumberland
Fayette
Fentress
Grundy
Hancock
Houston
Jackson
Lewis
Morgan
Overton
Pickett
Scott
Stewart
Van Buren
Wayne
White

Urban and Special Populations

Chattanooga - East Ninth Street
Memphis - Beale Street
Eastern Band of Cherokee Indians

Counties/Areas Participating Under Current Budget

<u>Alabama</u>	<u>North Carolina</u>
De Kalb	Clay
	Yancey
<u>Georgia</u>	<u>Tennessee</u>
Fannin	Fentress
Union	Grundy
	Houston/Stewart (joint effort)
	Morgan
<u>Kentucky</u>	Scott
Butler	
Whitley	<u>Urban and Special Populations</u>
	Chattanooga - East Ninth Street
<u>Mississippi</u>	Memphis - Beale Street
Kemper	Eastern Band of Cherokee Indians
Marshall	
Winston	

EMERGENCY EMPLOYMENT ACT

Chairman HATFIELD. Gentlemen, on March 24, 1983, the President signed into law the Emergency Jobs Appropriations Act, Public Law 98-8. In that jobs bill, we had allocated \$40 million of appropriations to the TVA with the idea that TVA would obligate and have work underway in a matter of a few months. As I understand it, about a year later, after the enactment of this emergency legislation, TVA has been unable to obligate more than \$20 million of the \$40 million fund.

One of the arguments that we faced, particularly on the floor when I was managing the jobs bill, was the opposition argument that this money could not be effectively utilized and obligated early enough on public works kind of things to have an immediate impact on the job situation. We argued that was contrary to the assurances that we had been given by various and sundry agencies to which we were providing such moneys, and, as a consequence, if my information is correct, I feel a little embarrassed at this time that that argument may have had some merit, at least as it was raised in opposition to a \$40 million allocation to TVA.

Would you care to comment, and if this information is correct, when do you think TVA will be able to obligate the remaining funds which we have appropriated?

Mr. WILLIS. Mr. Chairman, we expect to have all of it obligated before the end of this current year that we are in. We obligated about \$20 million of the \$40 million that we had spent through December 1983. It is probably up to around \$27 million now. All of the money will be obligated before the end of this fiscal year and most of it spent and the work completed.

We are very proud that we were able to start the program and get

people working within 11 days after we were authorized to begin. We have now hired about 1,500 or so people that have gone to work in that program.

We were very careful in these programs, not just to get people at work in jobs that had no meaning or jobs that would have no lasting value. We think we have a good balance between getting a lot of people to work very quickly and getting a lot of permanent work done and at the same time, getting a lot of people trained so that they could secure permanent jobs and keep jobs after this program was over.

We will have the entire balance of the program completed at the end of this fiscal year.

Chairman HATFIELD. But why has it taken so long? I am not sure I have heard an answer.

Mr. WILLIS. We could have obligated the money earlier but we wanted to begin the program quickly; get people to work on specific projects that had lasting value rather than just make a long-term obligation through contractor work that may be done in ensuing years.

We wanted to ensure that we hired people from the TVA area, too. That was best achieved by our hiring the people directly rather than just obligating long-term contracts to outside contractors. We are very proud that we have gotten the number of people to work as quickly as we did in the valley on lasting projects. Simply obligating money would not necessarily have achieved that goal.

Chairman HATFIELD. Was there any way that you could accelerate on-going programs at the time? I don't hear any persuasive response as to why it has taken you all this time to obligate, particularly when the information that we had at the time that we were in the process of both drafting and managing the bill, was that this could be obligated quickly, immediately, not on make-work projects, not just throwing money at some kind of make-work projects, but that there were, in place, such programs with lasting benefits that could be either accelerated or expanded in order to have an immediate impact upon the job situation at the time the bill was pending.

I still don't understand why you are not going to be able to obligate this until the end of this fiscal year.

Mr. WILLIS. We will have it done by the end of this year. One of the problems in obligating the funds more quickly was that we had a legislative restriction that was added just as the program was to be implemented that we had to conduct all of the work on our own facilities. That eliminated many of the projects. We couldn't go outside TVA facilities and do things in the valley that we might have done faster.

Again though, we are not simply obligating funds through contracts that will be spent in ensuing years. We actually have a spending program. We will get those jobs done earlier than if we had contracted the full amount. We think we accomplished that and got jobs moving faster in the process rather than just obligating the money to be spent sometime later.

Mr. RICHARD FREEMAN. Maybe I can help by giving an example of the kind of project that we could start very quickly and did start very quickly will probably be finished by the end of this fiscal year, and that is tearing down some of the obsolete facilities at Muscle Shoals. If we had contracted, used an outside contractor for that, we could have obligated all of the funds allocated to this project at the time we signed the contract. We decided we could control those costs much better and have a much more labor-intensive, satisfactory project if we did it with people we hired for the job.

Now, it has taken 2 years, in effect, to do that, but that money is all committed in the sense that we knew where that money was going to be spent, even if it had not been technically obligated. It has done the job of providing, in one of the highest unemployment areas in the Nation, very effective jobs.

So that I think part of the issue may be what you technically call obligated. We have committed where all the money is going to be spent. We are trying to do it with great care, however, to be sure that we get the most jobs for our dollars and that the work is not wasteful work; it is effective work.

Chairman HATFIELD. How many jobs did that create?

Mr. RICHARD FREEMAN. Do you have the Muscle Shoals figures?

Mr. SHIELDS. 230.

Mr. RICHARD FREEMAN. 230 jobs.

Chairman HATFIELD. New jobs over and above what you had anticipated.

Mr. RICHARD FREEMAN. Yes, that has been work that has been needed to be done for decades. Those are World War I buildings, and some of which we had to isolate because they are a danger. This job is something that badly needed to be done, but within the kind of budget we had, we just couldn't do that.

Mr. DEAN. We had a similar situation at our Land Between the Lakes area in Kentucky. We have a lot of roads that needed upgrading, and we were able to put a lot of people in gainful employment to do that.

Of course, those things don't happen overnight. You get your forces together and your plans made.

Chairman HATFIELD. I would like to have your comments in response to some other questions that I have—perhaps you would like to elaborate?

Mr. RICHARD FREEMAN. We can elaborate on that question, too, if you like, Mr. Chairman.

Chairman HATFIELD. Yes, elaborate on that, as to whether it was a design problem or an interpretation of when funds are technically obligated, because the intent of the jobs bill was to have an immediate impact on meaningful work, not just a make-work effort.

We found that the Corps of Engineers was able to implement and obligate their funds rapidly in order to have an impact on the jobs problem. We have found that other agencies of the Federal Government were able to do likewise. We also have found that those moneys

that we transmitted to the States, that the States were able to respond; that the counties, the cities, the private agencies, all of which had been part as a recipient group, have been able to have an immediate impact upon jobs.

I am hearing today, it seems to me, that we had about half of that obligated in the sense of an immediate impact and some 200 jobs, but—

Mr. RICHARD FREEMAN. That was one location.

Mr. DEAN. We have hired about 1,500 total.

Chairman HATFIELD. I stand corrected. There were a couple thousand jobs, I guess, of the \$20 million represented.

Mr. RICHARD FREEMAN. Yes, that is correct.

Mr. WILLIS. That is right.

Chairman HATFIELD. It would be very difficult if we were about the business of trying to develop another jobs bill, say, at this time to have unobligated moneys from the last jobs bill, because then it would appear that this public works type of effort does not have the kind of immediate impact that we intended it to have. So I would like to have you comment further on that.

Mr. RICHARD FREEMAN. We will be glad to. The TVA does not defer to the other agencies in terms of the speed with which we acted. We have done most of this with our own forces, and so the funds are not actually obligated until the work is done in our case. It is not like letting a contract which the Corps of Engineers enters into, which then obligates the funds at the point of signing that contract.

Chairman HATFIELD. Of course, I would observe that it seems to me that you ought to be able to do it faster when using your own people than letting out contracts.

Mr. RICHARD FREEMAN. We did, and I want to demonstrate that, as opposed to entering into a contract, that obligates Federal moneys whether the work is started or not. That was the point I wanted to make.

[The information follows:]

TVA'S JOBS BILL PROGRAM

In implementing the jobs bill program, TVA had two main goals: First, hire as many long-term unemployed valley residents, including an equitable number of women and minority group members, as possible; and second, perform work that would be beneficial to TVA in both the near and long term. The emphasis was on maintenance and repair work that had already been identified but that had not been done due to the unavailability of funds. It was decided that the most effective way to attain these goals was to maximize direct TVA hiring and not use a large number of contracts. This has proven to be the case. We were able to hire people within 11 days of the bill becoming law and have met our equal opportunity goals. Conversely, we have found that some of the contractors we have employed for specialized work have not actually hired any new employees—rather, they have used their existing crews.

We also realized that while signing contracts would result in quick obligations, obligations themselves do not mean immediate expenditures and new jobs. For example, by the end of fiscal year 1983, the Corps of Engineers had obligated 83 percent of their jobs bill funds. Yet the actual expenditures were only 57 percent of the funds obligated. Currently, TVA has obligated 57 percent of its jobs bill funds. Of this amount,

96 percent has actually been expended in creating new jobs. TVA had committed 89 percent of its jobs bill funds to specific activities within TVA in the first month after the bill's passage. All the funds were committed by the end of fiscal year 1983. If we had contracted all the work instead of insuring compliance with the intent of Congress by doing the work ourselves, those commitments would have been reported as obligations. This would be equivalent to TVA having obligating 100 percent of its jobs bill funds in fiscal year 1983.

By using jobs bill funds in "... expediting work on the continuing construction program and new starts under the continuing authorization program ..." (William R. Gianelli, Assistant Secretary of the Army (Civil Works), before the Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate, on the fiscal year 1985 civil works budget), the Corps of Engineers may have hired people more quickly than otherwise, but probably did not create many more jobs than it eventually would have in any case. By utilizing work that would not have been funded by any other means, TVA insured the creation of new jobs and the new skills that were learned in performing them. As you can see, TVA has succeeded in achieving the goals of the Emergency Jobs Appropriation Act; namely, to put the long-term unemployed back to work as quickly as possible.

Chairman HATFIELD. We have other questions, gentlemen, that we would like to submit to you, Mr. Chairman.

Mr. DEAN. Yes, sir. We will certainly take care of those.

BROWNS FERRY NUCLEAR PLANT

Senator SASSER. May I ask one other question?

Chairman HATFIELD. Yes, Senator Sasser.

Senator SASSER. Gentlemen, I have been concerned, and I suspect you have, too, about recent reports of Nuclear Regulatory Commission violations which have been cited against the operation of the Browns-Ferry nuclear plant. Could you tell the committee how many violations have occurred in the last year and the amounts of fines that have been levied against TVA as a result?

Mr. DEAN. The manager of power is here. He might have the numbers with him.

Mr. Parris?

Mr. PARRIS. I have some numbers here that we could pull out. If we could, I would like to supply those for the record.

Senator SASSER. That would be fine. That would be adequate, just to provide it for the record. Thank you, Mr. Parris.

[The information follows:]

NUCLEAR REGULATORY VIOLATIONS AT BROWNS FERRY NUCLEAR PLANT FROM MARCH 1, 1983, TO FEBRUARY 29, 1984

Violations recorded during the time period mentioned were 2 for NRC severity level III, 39 for NRC severity level IV, and 25 for NRC severity level V. Five of the level IV violations and two of the level V were based on findings against corporate quality assurance practices. NRC severity level III violations normally result in fines, but because of the circumstances associated with these violations the NRC did not fine TVA. However, TVA in November 1983, was fined \$1,000 by the State of South Carolina for exceeding the limitation on water amount contained in a steel container of low-level waste.

Senator SASSER. I might say that that is a matter of some concern to me, and I have gotten a number of letters from people in the valley

concerned about it. We have got the Sequoyah nuclear plant coming on line now, and Watts Bar and Bellefonte will soon be in operation.

When we look at what has transpired at Browns Ferry, it gives laymen, at least, a reason for concern. The question comes as to whether TVA is adequately training its nuclear powerplant operators. I was privileged to go through the training facility that TVA provides for the nuclear powerplant operators, but I want to pose that question to the board or Mr. Willis.

What do you think about the status of training of your nuclear powerplant operators, and can you trace some of your problems within NRC violations to the plant operators themselves? What is the reason for it?

Mr. WILLIS. We are very proud of our training program for our operators. We think it is one of the leading ones in the country. We are confident that we have good training programs and we are developing good people for operations.

Most of the violations that occurred in the past at Browns Ferry or other plants have been more technical violations regarding procedures, not a great many of them are operator oriented.

As an example, the Sequoyah plant is in the second year of operation, and we have a very excellent record so far on that.

Senator SASSER. Are all the units operating at Sequoyah?

Mr. WILLIS. Yes, all the units are operating. We expect to have Watts Bar on line this summer.

Mr. DAVID FREEMAN. Senator Sasser, I would like to add one word right now in addition to adding the numbers later. This board has been very concerned about the safety of our nuclear plants, and, indeed, the new manager of nuclear power, Mr. Coffey, has instituted a number of technical actions in the last few weeks, including the laying off of several hundred workers at Browns Ferry in order to get that work force to a size that can be better managed and to impress upon the work force the need to turn this record around and bring the number of violations down. Those actions have been taken. There have been a number of other management actions.

The board has been deeply involved in this. We feel that with the management of forces that we have now, consolidation of our construction and power organizations, all under Mr. Parris, and Mr. Coffey's stress on nuclear safety, we are going to reverse the trend of Browns Ferry. The Sequoyah plant is coming through with some very good records in safety that give us a basis for expecting that the Browns Ferry situation is going to show improvement.

We are, like you, concerned about the record of the past, but we believe that is the past.

Senator SASSER. Have you put a new manager in at Browns Ferry?

Mr. DEAN. We have a new manager of nuclear power, Senator.

Senator SASSER. That was within the last few months; isn't that correct?

Mr. DEAN. The management of the plant itself is the same.

Senator SASSER. But you have got somebody new managing the nuclear?

Mr. DEAN. A new manager of all of the nuclear power operation, yes, sir.

Senator SASSER. Is that at Browns Ferry or all of them?

Mr. DEAN. Yes, all of them, but he is deeply interested in Browns Ferry. Without belaboring the point, Browns Ferry is a fairly crowded plant with three reactors, and it is hard to work in there. It is a tricky plant to make modifications in. We are making some modifications, and some of these so-called violations you heard about had to do with things that were on a reactor that was not even in operation.

In other words, it was just too many people trying to work in one area. We will be glad to give you details on that if you like.

Senator SASSER. Mr. Chairman, I have some other questions, but in the interest of time, I will submit them for the record.

Thank you.

Chairman HATFIELD. Thank you, Senator Sasser. We will receive them and make them part of the record.

Senator STENNIS. Mr. Chairman, I have a very brief question if I may ask it.

Chairman HATFIELD. Certainly, Senator Stennis.

TENNESSEE-TOMBIGBEE WATERWAY

Senator STENNIS. Gentlemen, I know you are interested in the Pickwick lock and dam, and as you know, Tennessee-Tombigbee Waterway is expected to be completed now by September 15, 1985. Now we want through traffic to start moving south, as well as north, and I know that you claim that Pickwick lock as yours, don't you?

Mr. WILLIS. Yes, sir; we are very proud of it.

Senator STENNIS. I know you are going to have it ready.

Mr. WILLIS. Yes, sir.

Senator STENNIS. When the waterway opens for business, is that right?

Mr. WILLIS. Yes, sir. We expect to operate that Pickwick lock this summer.

Mr. RICHARD FREEMAN. On time and under budget.

Senator STENNIS. All right. That is fine.

Chairman HATFIELD. That is a familiar sounding project Senator Stennis has raised, the Tennessee-Tombigbee Waterway.

Gentlemen, I want to congratulate you on making some of those tough decisions early on in the canceling of some of these nuclear plants and deferring others. I only wish that perhaps we might have had that same foresight in the Pacific Northwest as it relates to some nuclear powerplants out there that we still have great and monumental problems with—I congratulate you on your early decision to reassess the need and role of this nuclear plant and nuclear technology.

That is an editorial gratuitous comment, and I don't expect you to respond to it, but I am delighted to know that you are willing to stand up to that tough decision. You made a difficult decision, I know.

ADDITIONAL QUESTIONS FOR THE RECORD

I will submit some additional questions for the record. And Senator Stennis and Senator Sasser have additional questions as well. If you could give those your attention.

Mr. DEAN. We would be pleased to respond, Mr. Chairman.

[The questions and answers follow:]

QUESTIONS SUBMITTED BY CHAIRMAN HATFIELD

PAYMENTS TO THE TREASURY

1. Question: Last year's budget program was based on a \$104 million payment to the Treasury. However, the 1985 budget justification indicates that you expect to repay \$114 million. What accounts for the difference?

Answer: Total Treasury payments include annually both a repayment on appropriation investment and a return on the appropriation investment in power facilities. The repayment on the appropriation investment is \$20 million. The annual return on the appropriation investment is based upon the computed average interest rate payable to the U.S. Treasury on its marketable public obligations as of the end of the prior fiscal year. Through an oversight, the 1984 Budget Program only included estimates for the return on appropriation investment and did not include \$20 million for repayment. The 1984 estimate should have been \$124 million. The overall payment to the Treasury is lower than the 1984 estimate because interest rates are expected to be lower. Calculation of total payments to the U.S. Treasury are shown below:

<u>1984 Budget Program</u> <u>(In Millions of Dollars)</u>	
Repayment on appropriation investment in power facilities.....	20
Return on appropriation investment: 12.082 percent times the appropriation investment of \$862 million.....	<u>104</u>
Total.....	<u>124</u>
<u>1985 Budget Program</u> <u>(In Millions of Dollars)</u>	
Repayment on appropriation investment in power facilities.....	20
Return on appropriation investment: 10.850 percent times the appropriation investment of \$863 million.....	<u>94</u>
Total.....	<u>114</u>

2. Question: TVA's repayment to the Treasury has been falling over the past several years--the actual repayment in 1982 was \$129 million. Briefly and in layman's terms, what governs and determines how much TVA must repay the Treasury?

Answer: TVA's repayment to the Treasury of the appropriation investment in the power system remains constant at \$20 million. TVA also pays to the

Treasury a return on the outstanding appropriation investment--like a dividend. As just described, the amount of this annual return depends on the interest rate the Treasury is paying on its own obligations and the size of the outstanding appropriation investment. Thus, either or both a change in interest rates and the amount of appropriation investment outstanding will bring about a change in total payments to the Treasury.

3. **Question:** Could you provide for the record a historical perspective on how and why, including possible legislative changes, the required and actual repayment has changed over the years?

Answer: Section 15d(e) of the TVA Act requires the payment from net power proceeds of a return on the net appropriation investment in power facilities, plus repayments of such investment, beginning with fiscal year 1961. The amount of return payable during each year is based on the outstanding appropriation investment as of the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations as of the same date. The statutory repayment schedule provided for payment of not less than \$10 million for each of the first five years (1961-1965), \$15 million for each of the next five years (1966-1970), and \$20 million for each year thereafter until a total of \$1 billion shall have been repaid.

Variations in payments since 1961 for return on appropriations reflect changes in interest rates and appropriation investments. Required payments have been made as follows:

<u>Fiscal Year</u>	<u>Repayment of Appropriations</u>	<u>Return on Appropriations</u>	<u>Total</u>
1961	\$10,000,000	\$41,432,398	\$51,432,398
1962	10,000,000	36,541,639	46,541,639
1963	10,000,000	38,874,543	48,874,543
1964	10,000,000	40,206,432	50,206,432
1965	10,000,000	42,599,978	52,599,978
1966	15,000,000	43,873,084	58,873,084
1967	15,000,000	47,124,973	62,124,973
1968	15,000,000	46,861,924	61,861,924
1969	15,000,000	53,082,238	68,082,238
1970	15,000,000	57,648,799	72,648,799
1971	20,000,000	65,146,528	85,146,528
1972	20,000,000	55,810,390	75,810,390
1973	20,000,000	53,784,450	73,784,450
1974	20,000,000	63,422,241	83,422,241
1975	20,000,000	71,371,901	91,371,901
1976*	25,000,000	81,389,374	106,389,374
1977	20,000,000	64,016,716	84,016,716
1978	20,000,000	61,715,988	81,715,988
1979	20,000,000	68,867,773	88,867,773
1980	20,000,000	78,413,026	98,413,026
1981	20,000,000	86,416,618	106,416,618
1982	20,000,000	109,477,526	129,477,526
1983	<u>20,000,000</u>	<u>106,566,909</u>	<u>126,566,909</u>
Total	<u>390,000,000</u>	<u>1,414,645,448</u>	<u>1,804,645,448</u>

*Includes adjustment for fiscal year change from June ending to September ending.

1. Also prior to 1961, under then existing legislation, TVA paid to the U.S. Treasury \$185,059,000 of power proceeds.
2. In addition to the payments from net power proceeds, certain nonpower proceeds are paid to the U.S. Treasury under the provisions of Section 26 of the TVA Act. Total payments through fiscal year 1983 from non-power proceeds amount to \$41,726,445.

POWER PROCEEDS AND BORROWINGS

4. Question: The 1985 budget reflects increased obligations of \$300 million to be covered by power proceeds and borrowings. Specifically, how much of this increase can be attributed to proceeds and how much to increased borrowings?

Answer: The \$300 million increase in obligations is primarily attributable to an increase in power operating expenses. This increase in power operations is covered by power proceeds. None of the increase in obligations is funded by borrowings.

5. Question: What will be the additional costs resulting from these increased borrowings?

Answer: As indicated in answer to question 27, none of the \$300 million increase in obligations is funded by additional borrowings. Therefore, there will be no additional financing costs resulting from this increase in obligations. The power program does, however, expect to increase estimated borrowings during fiscal year 1985 by \$500 million.

6. Question: Could you provide, for the record, an analysis of TVA's outstanding debt? The analysis should include a discussion of TVA's strategy in using proceeds versus borrowings, TVA's approach to debt retirement schedule and anticipated borrowings over the next 5-10 years.

Answer: At the end of fiscal year 1983 outstanding TVA debt was \$15.0 billion. TVA proprietary capital was \$2.6 billion, more than two-thirds of which came from power consumers, not from the Treasury. These figures are evidence of TVA's policy of utilizing borrowings to the maximum extent possible to finance power construction. TVA has followed this policy because it has resulted in economic benefits to TVA ratepayers, since the opportunity costs of the ratepayers have been much higher than the interest rates on TVA's borrowings. Also, to maintain these economic benefits it has been TVA's policy to refund maturing debt issues with new debt rather than increase rates to obtain the extra revenue needed to retire the debt.

Over the next several years because of declining construction expenditures, it appears that by 1987 TVA may be able to satisfy its capital requirements through internally generated funds. Much depends, however, on whether it becomes necessary to restart construction of the four deferred nuclear units or otherwise provide added generating capacity. If this occurs, TVA's internally generated funds will be insufficient and additional borrowing as well as refinancings of maturing debt issues will be required. If not, TVA may actually have cash remaining for several years after satisfying capital requirements from internally generated funds and some portion of maturing debt issues may be retired.

Below are tabular presentations of debt issues maturing through fiscal year 1989 and projected changes in outstanding debt through fiscal year 1989.

TVA's Scheduled Debt Maturities

Held by the Public		
1960 Series A, 4.40%	matures November 15, 1985	\$50,000,000
1961 Series A, 4-5/8%	matures July 1, 1986	50,000,000
1962 Series A, 4-1/2%	matures February 1, 1987	45,000,000
Held by the Federal Financing Bank		
1979 Series B, 9.155%	matures May 31, 1987	500,000,000
1975 Series C, 8.35%	matures May 31, 1988	200,000,000
1979 Series A, 9.296%	matures February 28, 1989	500,000,000

Estimated Changes in Outstanding Indebtedness

	<u>From</u>	<u>To</u>
1984	\$700,000,000	\$700,000,000
1985	500,000,000	500,000,000
1986	242,000,000	243,300,000
1987	-23,200,000	305,300,000
1988	-70,000,000	217,300,000
1989	-232,100,000	260,200,000

The estimates in the column on the left are based on assumptions of low or medium load growth and no requirements for new base load capacity until after the year 2000. The negative estimates represent cash that could be used for debt retirement. The estimates in the column on the right are based on assumptions of high load growth and installation of new capacity equivalent to the four presently deferred nuclear units.

NORTH ALABAMA COAL GASIFICATION PLANT

7. Question: Setting aside the so called "special nature" of the proposed coal gasification plant in north Alabama, is it the professional judgment of the TVA Board that, in light of the uncertainties with the Synfuels Corporation and problems retaining Consortium participants, continued expenditures of funds in 1985 is warranted?

Answer: TVA is optimistic that our negotiations with the Consortium and the Synthetic Fuels Corporation will result in the obligation of all remaining funds in fiscal year 1984. The Board believes that the underlying rationale for the national synthetic fuels program remains as strong as ever. The dependence on imported, especially Middle Eastern, sources of petroleum for one-third of our liquid fuel needs is of grave concern

given the continuing unrest in that region. We thus continue to support the synthetic program put in place to provide a domestic alternative.

The economic uncertainties facing all synthetic fuels projects make them high financial risk undertakings--there is no prospect of success without the assistance of the SFC or the Congress. We believe that the north Alabama coal-to-methanol project is the best candidate available for putting abundant high-sulfur eastern coal into the gasoline tanks of America's automobiles. The progress we have made with the Consortium and the SFC is significant. The national security need is more urgent than ever, and we believe that this is one area where the national need suggests we proceed as rapidly as possible.

8. Question: If the proposed activities planned for 1985 had to be provided from nonappropriated sources, would the TVA Board approve such expenditures?

Answer: The nature of the north Alabama coal-to-methanol project is such that TVA has no source of funding other than appropriations. Although the project is energy related, it does not support electric power production or conservation. The Board therefore could not use TVA electric ratepayer funds for such expenditures.

COLUMBIA DAM AND RESERVOIR

- 9a. Question: Last year in response to a question regarding Columbia Dam, TVA indicated that it expected to determine likely success of the mussel transplant effort during 1983. Update the committee on the Columbia Dam project, particularly the activities related to the mussel conservation program and negotiations with the U.S. Fish and Wildlife Service.

Answer: Since 1981 TVA has generally limited construction to roads and bridges which are necessary even if the project were not completed. This work was finished in September 1983. We are, however, continuing some work on the conservation program, cultural investigations, and water quality studies. The carryover of about \$5.1 million for fiscal year 1984 is sufficient to fund the ongoing activities. The overall project is about 45 percent complete. Some \$80 million has been obligated to date. Remaining costs are estimated at \$160 million.

As you may recall, in 1979 it appeared that the endangered mussels presented an insurmountable conflict with the project as planned. TVA Board members met with then Secretary of Interior Andrus and were successful in working with the U.S. Fish and Wildlife Service (FWS), to develop a mussel conservation program for the long-term survival and growth of mussel species that would allow the project to be completed. After several years of careful study, 4,000 mussels were transplanted into 4 streams in the fall of 1982 as scheduled.

Initial surveys on the success of the transplants have been conducted and unfortunately there is considerable question whether or not the FWS criteria for "likely success," which would permit resumed construction, have been met. Evidence of reproductive success was far higher than the goal agreed to between TVA and FWS. The goal was at least 10 percent of female mussels carrying larval mussels. Biologists found that 85 to 100 percent of the females had larvae in their gills. On the other hand, the goal for likely success of the project called for 50 percent survival at three of the four transplant sites. Only at the site in North Fork Holston, where 70 percent survived, was that achieved. The survival rate was 10 percent at the Buffalo River site, 20 percent on the Duck, and 40 percent on the Nolichucky.

We have asked the Interagency Coordinating Committee, which oversees the mussel conservation program, to review the survey data. The data have also been presented to FWS for its separate evaluation. Until these reviews are complete, we cannot predict whether failure to reach the survival goal will actually affect the success of the program.

- 9b. Question: Do you have an agreed-to conservation program with the Fish and Wildlife Service? When do you expect such a program to be approved by USFWS?

Answer: We have a mussel conservation program that was agreed to in principle by the Columbia Dam Coordinating Committee and the U.S. Fish and Wildlife Service (FWS).

TVA was asked by the Office of Management and Budget to study alternatives which might provide essential project benefits and be consistent with applicable laws such as the Endangered Species Act. The study published in April 1979 concluded that no reasonable alternatives to completion existed. However, the alternative report outlined a conservation program to preserve the molluscan and other fauna in the area. If successful, it would permit the project to be finished as originally planned. The Department of the Interior accepted this approach to protecting the endangered species and issued a favorable biological opinion to TVA in September 1979 and to the Corps in April 1980. The Cumberlandian Mussel Conservation Program is a two tier effort, using an evaluation of program progress based on criteria set for each stage. The first tier requires a finding by the FWS of "likely success." Third stage diversion and the remainder of the major construction activity must be delayed until the likely success of the conservation program is demonstrated to the satisfaction of FWS. The second tier requires "proven success" to be demonstrated. Until such time as FWS is satisfied of the proven success, lake impoundment would be precluded.

The Coordinating Committee and FWS agreed to criteria for likely and proven success on May 2, 1982. TVA set out to demonstrate "likely success" in the fall of 1983 based on providing information about the "likely success" criteria.

In an April 27, 1983, letter to TVA, the Fish and Wildlife Service stated that additional information, analyses, and field work for the criteria was needed for its evaluation of likely success. TVA's September 12, 1983, reply letter set out a schedule for responding to 10 of the 12 specific items TVA had identified in the FWS request. TVA believed one item was unnecessary, because it would have no direct utility to the conservation program. The other item was already ongoing. On November 18, 1983, FWS asked TVA to submit the material which TVA had scheduled to complete at the end of December so that a determination of "likely success" could be made. That information is currently being prepared for submission to FWS, along with the information on the "likely success" criteria.

10. Question: What activities related to Columbia Dam will be undertaken during 1984?

Answer: Construction on the project was stopped in September of last year. Some work continues on archeological, historical, and cultural investigations, water quality studies, and the mussel conservation program. TVA is reassessing these activities at this time in light of the uncertain future of the conservation program.

11. Question: Given the slow progress on this project, do you expect the entire \$5.1 million in available funds to be utilized in 1984.

Answer: Exact expenditures for fiscal year 1984 will depend on the current reassessment of project activities.

EMERGENCY JOBS BILL

12. Question: On March 24, 1983, the President signed into law the Emergency Jobs Appropriations Act, Public Law 98-8. In making the \$40 million appropriation to TVA under the Jobs Bill, the Committee thought that the proposed work was that which TVA could have funds obligated and works underway in a matter of a few months. Yet now, almost one year after enactment of that emergency legislation, TVA has been able to obligate only \$20 million of the \$40 million Congress provided. So, the criticism of opponents that this type of work is slow in responding to the urgent employment needs today is well founded. Would you care to comment--the Committee thought TVA was ready to go with this work.

Answer: The purpose of the jobs bill was to put unemployed persons back to work as soon as possible. We feel that TVA has done a good job toward achieving this purpose. The amount of funds an agency has obligated is not necessarily a good measure of how soon or how effectively it has put persons back to work. For example, TVA could have "obligated" its entire \$40 million the first week if it had simply contracted with an outside firm to run its jobs bill program for it or to build some major facilities--regardless of the fact that it could be months before the first person was hired.

But we believe that contracting out most of our jobs bill program, while looking good on paper with large obligations, would have been shirking our responsibility to see that the program achieved its purpose--creating jobs--effectively and efficiently. This approach allowed more control to

ensure that long-term unemployed Valley residents, including an equitable number of women and other minority group members, were hired. We feel this approach was more responsive to the intent of the program than was an immediate obligation through merely signing a contract, which may or may not result in near-term spending or hiring.

TVA spent considerable time and effort in planning for jobs bill funds prior to enactment of the Emergency Jobs Appropriations Act, Public Law No. 98-8. Because of this, we were able to actually hire people within 11 days of the bill's passage. Some delay and revised planning was caused by the unexpected restriction in the legislation requiring TVA to apply these funds primarily to TVA facilities. Yet within one month of the bill being signed into law, TVA had committed \$35,723,000 (89 percent of the total appropriated) to specific projects. Six months later, at the end of the fiscal year, all funds were committed, with actual obligations of \$13,782,000 (33 percent) and expenditures of \$13,447,000 (33 percent). Through January 1984, two months short of a full year under the program, obligations are \$23,723,000 (57 percent) and expenditures are \$22,666,000 (55 percent). We feel that TVA's program is responsive to the desires of Congress and is providing a real and continuing benefit to the Tennessee Valley, which is lagging behind the rest of the Nation in the recovery.

13. Question: Is the Board actively reviewing the problem so that the remaining unobligated funds are spent without further delay?

Answer: We do not believe that there is any problem. The Board, however, remains actively involved in the implementation of this program and is making every effort to ensure that the funds are expended timely and efficiently.

14. Question: When do you think TVA will have 90 percent of the \$40 million obligated?

Answer: TVA will have obligated 90 percent of the appropriated amount by the end of July 1984.

DIRECT LOAN OBLIGATIONS

15. Question: What level of direct loan obligations or loan guarantee commitments, if any, does TVA anticipate in 1984 and 1985?

Answer: Direct loan obligations are used primarily to encourage conservation measures in the TVA power service area. Loans by the Federal Financing Bank to the Seven States Energy Corporation which are secured by TVA's obligations to make payments under its nuclear fuel lease with Seven States are reported by the FFB and OMB in the President's budget as loan guarantee commitments.

The following table supplies the information requested.

	In Thousands	
	1984 Estimate	1985 Estimate
New loans: disbursements for direct loans.....	\$84,700	\$89,423
FFB transactions: new loan disbursements.....	164,800	88,300

UNOBLIGATED BALANCES

16. Question: The 1985 budget justification material projects that \$9,192,000 of unobligated 1984 funds will be carried over into 1985. To what activities will these funds be allocated? Provide a brief description of what work will be accomplished.

Answer: Of the total unobligated balance of \$9,192,000, \$7,000,000 will be used to complete construction of the new lock at Pickwick Landing Dam in west Tennessee in 1985. The remainder, \$2,192,000, when combined with the request for \$115,308,000 in new appropriations, will finance other TVA program activities in 1985.

REGIONAL WATER MANAGEMENT

17. Question: TVA's 1985 budget proposes to increase the Regional Water Management program from \$1.3 million in 1984 to \$2.35 million in 1985. Briefly, why do you feel that an increased priority on nonpoint pollution control is warranted? How much is TVA spending on similar point source work?

Answer: Nonpoint source pollution is the primary cause or is a major contributor to 7 of the 10 critical water quality problem areas identified in

the Tennessee Valley region. While progress is continuing on the correction of point source related problems, little progress is being made on correcting water quality problems associated with runoff from abandoned mine lands, agricultural lands and animal waste, urban areas, and failing septic tanks. Benefits from point source pollution control efforts are often not realized because of the failure to concurrently control nonpoint sources. A good example is at Copperhill, Tennessee, where a \$10 million expenditure for industrial waste treatment has failed to restore beneficial use of the Ocoee River because erosion from 6000 acres of denuded land is uncontrolled.

TVA does not spend funds directly in the cleanup of municipal or industrial point sources. TVA does, however, collect data and information to define water quality problems associated with point and nonpoint source discharges. TVA provides this information to the public and States and assists States in determining the corrective actions that are needed to restore water quality in TVA reservoirs and their feeder streams.

18. Question: What portion of this nonpoint source work is related to TVA operations and facilities? Provide a cost breakdown and description of the work.

Answer: A small portion of these funds, about \$50,000, is used to fulfill TVA's agreement with the State of Tennessee to serve as the management agency to control nonpoint source pollution originating from properties under TVA's custody or control in Tennessee. These funds are used to assist the State in developing best management practices for controlling nonpoint sources, cooperating with other management agencies in correcting problems, and to prepare an annual report to the State on TVA nonpoint source management activities. The actual implementation of activities to control nonpoint sources under this agreement is accomplished as part of the overall TVA land management program funded as a part of multipurpose reservoir operations. Activities on single purpose power facilities are funded entirely with power system funds.

19. Question: How does the structure compare (or differ) from other programs in the Federal Government?

Answer: The three Federal agencies which have key roles in controlling nonpoint source pollution in the Tennessee Valley are the Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), and TVA. EPA has the lead role and is responsible for setting policy, developing regulations and control strategies, and delegating program management to the States and other Federal agencies as appropriate. USDA programs focus on controlling agricultural erosion and maintaining farm income. Although water quality improvements result from USDA programs, they are secondary objectives. TVA efforts focus directly on identifying and correcting water quality problems associated with nonpoint source pollution from urban areas, failing septic tanks, and abandoned mine lands, as well as agricultural runoff and animal waste. TVA's role complements those of EPA and USDA by addressing a wider variety of issues, focusing on water quality improvements which can be achieved through nonpoint source controls, and demonstrating a balanced approach of point and nonpoint source controls for a major watershed. TVA works closely with the USDA, EPA, and State and Federal agencies to enhance the water quality benefits resulting from programs conducted by those agencies.

20. Question: Can you provide for the record an estimate over the next five fiscal years of the funding requirements resulting from the increased emphasis on nonpoint source pollution?

Answer: It will take several years to educate and encourage landusers to adopt sound land management practices in areas such as agricultural, urban, mining, and rural waste disposal. Over the next five fiscal years, TVA would need from \$800,000 to \$1,000,000 each year to effectively address nonpoint source pollution management needs.

21. Question: TVA plans to initiate two new demonstration projects in 1985. Explain each of these efforts in more detail, and provide a cost estimate and funding schedule for the demonstration efforts.

Answer: TVA proposes to initiate, in cooperation with one or more Valley States, local governments, and other Federal agencies, a water quality rehabilitation project. It would be conducted in a watershed such as the

upper Holston where water use is being impaired from both point and non-point sources of pollution. All nonpoint sources within the demonstration watershed would be located and characterized. The contribution each source makes toward water pollution would be documented. Based on this inventory, examples of each type of nonpoint pollution source would be selected and corrective measures implemented to show their effectiveness in improving water quality. Regulatory and nonregulatory approaches to resolving remaining water quality problems within the watershed would be developed and a long-range watershed management strategy would be determined. Results of the demonstration would be applicable to other watersheds which would be targeted in future years. The estimated cost to initiate this project in fiscal year 1985 is \$500,000 and up to \$1,000,000 would be needed in succeeding years to complete the project and initiate a similar demonstration in the next highest priority watershed.

In the other demonstration, resolution of water supply problems would be emphasized. An adequate supply of good water is essential to the social and economic development of Valley residents, yet many public water supply systems are unable to meet even current demands. Poor water quality, inadequate storage capacity, inadequate supply during droughts, cover operation, and maintenance and replacement costs are the major problems. In fiscal year 1985 TVA proposes to carry out a demonstration project in northeast Mississippi, an area which has been plagued with water supply problems, to assist public water supply systems in dealing with inadequate quantity and quality of water supplies. Alternatives for meeting the long-term water supply needs would be demonstrated through financial analysis and regional water supply planning.

The estimated cost of this demonstration in fiscal year 1985 is \$500,000 and about \$200,000 would be required to complete the project in fiscal year 1986. The results of the demonstration could be transferred to other areas in the Valley facing similar water supply problems. TVA would require an additional \$300,000 in fiscal year 1986 to expand the demonstration to another area.

22. Question: Will these demonstration projects be accomplished on a cost-shared or matching fund basis with the States? If not, why?

Answer: The river basin rehabilitation project, if conducted in the upper Holston River basin, would involve cost-sharing by the State of Tennessee. The State would share in the water quality data collection program, waste load allocation, and in the implementation of corrective actions. This is the highest priority watershed for the State of Tennessee.

In the northeast Mississippi water supply demonstration, local governments would share the cost by assisting in collection of basic water use and financial data.

23. Question: What are TVA's plans for additional demonstrations in the future? How do you expect this to affect future appropriations?

Answer: These demonstrations in river basin rehabilitation and water supply development address two pressing water quality and water quantity problems. Both have broad applications to similar problems throughout the Tennessee Valley region. After completion of these two demonstrations, TVA would like to apply the results to these other problem areas. We anticipate requesting \$1 to \$2 million for these activities in each of the next five fiscal years.

NATURAL RESOURCE PROGRAMS

24. Question: What actions has TVA taken over the past year to require those who use or benefit from some of your natural resource activities to share a substantial part of the cost of the activity?

Answer: The fundamental premise on which TVA carries out its activities assures that the users and beneficiaries participate in its cost. TVA does not make grants. Rather, TVA, in cooperation with the people, helps to further proper development. The mechanism for achieving this is the cooperative arrangement or contract under which TVA and users and beneficiaries each undertake specified obligations of an activity. A few examples are as follows:

- TVA was instrumental in establishing the Forest Resources Systems Institute, a nonprofit membership organization to develop and transfer state of the art computer technology to advance forest management on nonindustrial forests. The institute currently has 70 dues paying members and may be fully self-supporting in fiscal year 1986.
- TVA conducted three timber harvesting demonstrations in fiscal year 1983. The cost of arrangements, announcements, and performance of the demonstrations exceeded \$200,000. Sponsors other than TVA covered over 90 percent of this cost.
- TVA is upgrading its reservoir public use areas where camping is permitted and converting them to fee use. Six such areas were converted in fiscal year 1983, bringing the total to thirty-one.
- TVA instituted a policy of recovering certain administrative costs associated with reservoir land transactions and violation and encroachment actions. "Closing costs" are now charged for nonpublic reservoir land transactions. These costs are similar to those involved with private land sales. For some land use items, full administrative costs are charged when the transaction clearly benefits the applicant more than TVA or when the action involves correction of violations and unauthorized uses of TVA land or landrights.
- TVA worked cooperatively with the State of North of Carolina, landowners, the mining industry, the Soil Conservation Service, and local governments in reclaiming abandoned mica, feldspar, and clay mines in western North Carolina. In these and similar reclamation efforts TVA encouraged active participation by all cooperators. In many cases substantial assistance in the form of in-kind services helped stretch TVA dollars and actually achieve more and better reclamation.
- At Land Between The Lakes (LBL) user fees are charged at group camps, family campgrounds, and environmental education facilities to help defray operating costs. In addition, a fee structure has been developed

to recover costs of special interpretive evening and weekend programs. Cooperative agreements with other Federal agencies, and State and local governments and organizations have been increased and are providing valuable research data from several ongoing studies as well as expanded programming for the users of LBL.

FOREST RESOURCES

25. Question: TVA's budget request includes a sizeable increase for the forest resources portion of the land and forest resources program. What accounts for this large increase?

Answer: The large increase is attributable to funding the initiation of a research and development capability for the Forest Resources Systems Institute, a private, nonprofit membership organization that TVA helped establish. A large part of TVA's responsibility in the area of computer-assisted forest management planning should be shifted to the institute once this capability is available.

26. Question: Are any new activities or demonstrations planned in 1985? If so, provide a brief description of each and indicate the amount of funds included in the 1985 budget and an estimate of any future budget requirements.

Answer: New activities planned for 1985 include:

- New Product Marketing: This is an effort to market a series of new wood products derived from Valley timber as replacements for products manufactured and shipped in from other regions. Our strategy is to assume part of the risk normally assumed by the manufacturer and wholesaler to help achieve consumer acceptance of unfamiliar products.

Funding: 1985 - \$100,000. Total over six years - \$600,000.

- Forest Industry Complex Development: TVA would serve as the catalyst to establish a wood products industry--a pulp mill or other major plant--as the hub of a complex of smaller plants. The large plant would use wood--primarily mill and harvest residues--to cogenerate electricity and process steam for its own operation and for the rest of the complex at

substantial savings to the companies involved. Success could provide a competitive edge for these new firms and also provide a good market for underutilized, low-quality hardwoods.

Funding: 1985 - \$175,000. Total over four years - \$700,000.

- Forest Aggregation: Many small and several large ownerships would be aggregated into a cooperative that would be managed by a professional forest manager. Because of the economies of scale that could be realized, this could provide landowners a timber management and marketing advantage as well as an annual income from fee hunting of managed wildlife populations. This effort is directed at overcoming small landowner apathy over marketability of their forest resources.

Funding: 1985 - \$65,000. Total over five years - \$1,350,000.

- The production of laminated veneer would be demonstrated in a joint venture with a forest products company as a replacement for products now produced outside the region.

Funding: 1985 \$100,000. Total over five years - \$500,000.

- A computerized control system for kiln drying operations would be demonstrated in a joint venture with The University of Tennessee. Kiln drying is one of the most energy intensive and expensive parts of the production cycle of wood products. This equipment can significantly cut the time of the process and the energy expended in the drying process.

Funding: 1985 - \$50,000. Total over two years - \$75,000.

ENVIRONMENTAL AND ENERGY EDUCATION

27. Question: The 1984 budget justification for environmental and energy education presented to the Committee indicated that TVA provide either financial or technical assistance to six university-based environmental and energy centers in fiscal 1984, and no request was made to establish any new centers. Now the 1985 budget request includes funds for financial or technical assistance for 11 centers. Was a request ever made or informa-

tion presented to the Committee justifying establishing the additional five centers? If not, explain why.

Answer: The establishment of a network of environmental and energy education centers began in 1979. Since that time TVA has generally provided financial assistance to a university-center on a cost-sharing basis for five years after which time the center becomes self-supporting.

In 1983 financial and technical assistance was provided to six centers. TVA redirected funds at midyear of 1983 to allow establishment of two additional centers, resulting in eight centers on-line in 1984, instead of the six reflected in the 1984 budget document. The 1985 budget request would allow addition of 3 new centers for a total of 11, 5 of which would receive financial assistance. The remaining six centers, which by then would be financially independent of TVA, would receive only limited technical assistance.

28. Question: Does TVA have comprehensive plans or strategy for establishing these centers?

Answer: TVA's strategy is to complete a network of 17 university-based centers for environmental and energy education. The centers would be geographically sited so as to make services available within 50 miles of any Valley resident. Regional universities were identified as appropriate cooperators based on their ability to participate on a cost-sharing basis and on their ability to effectively administer and ultimately support these centers.

Once established the individual centers function as a delivery system for educational programs. The centers are active in teacher training, program development, regional services to citizen organizations, and research. Collectively, the personnel of the centers meet frequently with TVA staff to share programs and review operations.

This strategy includes financial assistance from TVA on a cost-sharing basis. The network will be sustained with technical assistance from TVA and specific contracted products from a variety of sources, including TVA.

Thus far the strategy has been cost effective with \$3 generated for each TVA dollar invested and about 6,000 teachers and 720,000 students reached annually.

29. Question: Does TVA expect to establish any additional centers in 1985? If so, how much funding is included in the 1985 budget?

Answer: In fiscal year 1985 TVA plans to add three new centers to the eight centers that currently exist. In 1985 financial assistance should be made available to five centers for environmental and energy education, and \$100,000 has been budgeted for these contracts.

ECONOMIC AND COMMUNITY RESOURCES

30. Question: TVA's 1985 budget request includes \$14.8 million for economic and community resource programs. How much of the \$14.8 million is budgeted for programs or activities outside of TVA's area of responsibility?

Answer: No funds from TVA's request for economic and community resources are budgeted for activities outside the 201-county TVA region.

31. Question: Has TVA established any matching fund or cost sharing requirements from State or local interest before proceeding with your economic or community development activities? Provide for the record an estimate of what percentage of the project development and implementation costs TVA has provided compared to that of local interests.

Answer: While TVA has not established fixed matching fund or cost-sharing requirements for its economic and community development activities, every effort is made to ensure that local resources are dedicated to support and carry out our assistance efforts in communities. In fact, this local commitment is a prerequisite to TVA involvement.

Local commitment of resources may take several forms, ranging from direct financial support to in-kind services, depending on the community's capabilities and the nature of the project. This flexible local matching requirement is critical to the success of TVA economic and community development efforts because it helps ensure local commitment for the undertaking.

TVA's economic and community development objectives are accomplished primarily through the provision of technical assistance to Valley communities. Therefore, TVA provides only a small portion of the total cost for developing and implementing a project. The actual percentage of cost involvement by TVA varies by project, but 10 to 15 percent is typical. These figures are exemplified by the Townlift and community preparedness programs in which, historically, investments exceed TVA program costs by a factor of 6.

Other programs, such as skills development and special opportunities counties and cities, generally provide direct project funding. Although these programs do not have specific formulas for cost sharing, financial participation from other local, State, Federal, or private project partners is required. Consequently, in these programs the TVA share of a given project varies, generally between 25 and 50 percent.

ECONOMIC RESOURCES

32. Question: Could you discuss briefly how TVA establishes its' budget priorities in the economic resources program? This question is generated by the reduction in activities to assist the poorest Valley residents while other specialized economic stimulus type work has received greater budget attention.

Answer: Because the Tennessee Valley regional economy has been among the hardest hit by the national recession, demands for TVA economic development assistance of all kinds have increased sharply. In responding TVA has attempted to allocate limited available resources between the poorer areas of the Valley and the typically more rapidly growing areas in a balanced way. While current priority and emphasis have been given to incorporating program elements that have the potential to more quickly stimulate a large number of new job opportunities in the region, attention continues to be given to program elements that assist economically disadvantaged Valley locations. Weighing the potential short- and long-term benefits of such activities against regional needs has led to the mix of program elements which has been implemented.

Significant opportunities exist to expand both kinds of effort. A larger number of projects could be conducted under the special opportunities counties and cities program, which is directed at the poorest areas of the region, to significantly increase the long-term economic opportunities in these areas. Similarly, experience with the existing industries program has shown that it has the potential, if expanded, to create up to 4,000 jobs annually.

33. Question: What portion of the \$3.3 million budget request is identified for increasing the TVA pilot project to simulate expansion of existing manufacturing firms?

Answer: Based on the favorable results of our existing industries program demonstration, TVA will allocate \$1.4 million to expand this program throughout the region in fiscal year 1985. We have been able to stimulate the expansion of many existing firms in the current demonstration by providing technical services, such as energy management surveys, transportation rate analyses, financial planning, air and water pollution control consultation, and employee training. Firms throughout the region are now requesting TVA assistance to help them lower their present operating costs and help plan for future expansions. We believe that this initiative could serve as a model for cost-effective government help to encourage the expansion of existing firms and the creation of new jobs.

34. Question: The budget justification indicates that 125 communities will be provided economic development analysis and 25 more will be provided engineering assistance in 1985. Have these 150 communities already made requests for assistance or are the figures based on experience from prior years?

Answer: TVA works with many communities on a recurrent basis, helping them assess their local comparative advantages and develop and implement sound strategies to create new jobs to support their local economy. Many of these assistance efforts take several years to realize positive results. While we do not yet have formal requests for all of the fiscal year 1985 economic analysis and engineering assistance efforts budgeted, many of these services would be extended to communities in support of local economic development assistance efforts already underway. Some capability has purposefully been reserved to enable TVA to meet local

development needs which should develop during fiscal year 1985 but which cannot be anticipated at this time. We have found this flexibility to be critical to our ability to offer timely assistance in support of local development efforts.

35. Question: What new demonstrations or pilot projects does TVA plan to initiate in 1985? How much is the budget for each?

Answer: The primary new initiative in the economic resources portion of the TVA budget request is the existing industries program, which offers an array of technical services designed to help stimulate the expansion of existing firms in the region. Limited demonstrations of this initiative in fiscal year 1983 and 1984 have convinced us that this is a very cost-effective way to stimulate the creation of new permanent private sector jobs. TVA plans to spend \$1.4 million in fiscal year 1985 to make this program available to over 200 existing firms across the Valley region.

SPECIAL OPPORTUNITIES COUNTIES AND CITIES

36. Question: Based on the contributions presented in the budget justification for special opportunities counties and cities, should a greater emphasis be placed on these programs?

Answer: The cost of job-creation projects conducted under the SOCC program is significantly less than long term support of the chronically unemployed through Federal transfer payments. SOCC projects result in economic benefits including new jobs and income enhancement to the residents and local economies of these poor areas which provide a lasting foundation for economic growth and development.

The SOCC program is a high priority for TVA. The TVA budget request for fiscal year 1985 reflects a careful allocation of limited resources over a broad range of important activities. We estimate an additional \$10 million could be effectively spent to implement comprehensive SOCC activities in all 50 counties. Should such additional funds be made available, TVA would implement an expanded program immediately.

COMMUNITY RESOURCES

37. Question: Explain why TVA has reorganized its community resources budget structure for 1985 by including an item titled regional waste and water supply.

Answer: This new line item was introduced as a result of requests received from county officials, State officials, and citizen groups throughout the Valley encouraging TVA to give increased emphasis to addressing hazardous and solid wastes, wastewater, and water supply management needs. TVA is recognized as a unique source of knowledge and as a catalyst for putting into practice solutions to these problems. Previously, waste and water supply activities were part of the community preparedness program.

38. Question: How is this activity different from the regional water management effort under your natural resources program?

Answer: The regional waste and water supply program addresses problems associated with management of solid and hazardous waste, wastewater treatment, and water supply. The regional water management program deals primarily with managing and improving water quality in the TVA system of reservoirs. The regional water management program frequently identifies, through its water quality work, problems whose solutions must come from the sources addressed by the regional waste and water supply program.

REGIONAL WASTE AND WATER SUPPLY

39. Question: Since this is a new line item in the 1985 budget, discuss briefly how this program has been constructed.

Answer: The consensus of seven State public health departments, Valley economic development groups, engineering firms, and local governmental officials was that TVA could play an important and needed role as a catalyst to improve solid and hazardous waste management within the region. This role would involve working in close cooperation with other parties--including local and State governments, public interest groups, and the private sector--that share the same interest. Thus, the new line item entitled regional waste and water supply is a reflection of a refinement

made in the previous regional waste management program. Several related activities have been combined to form a new program which now includes, solid waste management, hazardous waste management, water supply, leak detection, and wastewater treatment.

40. Question: What old, ongoing work has been moved in, what has been moved out, and what new activities will be initiated in 1985?

Answer: Ongoing work involves solid waste and energy recovery educational and technical assistance activities directed toward local communities, continuation of cooperative demonstration projects involving solid waste collection, recycling and resource recovery, and water loss leak detection assistance to communities or water systems. Activities no longer conducted as part of that program includes community landfill design assistance and performance of energy-from-waste feasibility studies. New activities that will be initiated in 1985 include those identified for hazardous waste management, a pilot water conservation project, several solid waste recycling demonstrations, and community wastewater management assistance.

41. Question: Has TVA developed a detailed program that lays out the activities it would like to do over the next several years? What are your budget projections for this activity for the next five years (be specific by year)?

Answer: This program is still in the formative stages and the details of a five-year plan have not yet been developed. Specific plans and trade-offs among current programs must be the result of public input about the most serious problems and the best options for their solution. The elements included in the program for 1985 are solid waste management, hazardous waste management, wastewater treatment, water supply, and energy from waste. Costs for fiscal year 1985 are currently estimated at \$1.5 million.

42. Question: Are any demonstrations or pilot projects of a capital investment nature envisioned. If so, what will be the budgetary impact?

Answer: No capital investments associated with demonstrations or pilot projects are included in the current budget request or are envisioned at this time.

43. Question: Now the 1985 request includes \$1.5 million for these activities. Can you provide for the record a list showing where, the amount and for what purpose these funds will be used?

Answer: The following table shows how funds are allocated between the various elements of this program in fiscal year 1985.

<u>Program Element</u>	<u>Budget Request (In thousands of dollars)</u>
Hazardous waste.....	150
Solid waste.....	650
Water supply.....	200
Waste water.....	300
Energy recovery.....	<u>200</u>
Total.....	<u>1,500</u>

The specific communities where projects would be conducted in fiscal year 1985 have not been determined at this time. These activities are, however, generally conducted in communities combining the most severe problems and the best likelihood for success.

44. Question: One of the activities planned in 1985 is a joint effort to demonstrate improved methods of solid waste management. Could you be more specific as to what demonstration works are planned and the estimated cost of the demonstration?

Answer: These cooperative demonstration projects are planned to advance recycling and resource recovery options appropriate for small towns or in rural areas. Collectively, these demonstrations represent a mix of innovative options having high potential for replication among other communities within the region and the Nation. Such methods include curbside collection of recyclables, retrofit of rural convenience centers for recycling, adaptive reuse of buildings as recycling centers, cocomposting of organic refuse and sewage sludge, and testing and evaluating potential uses for nonhazardous industrial wastes.

The total demonstration is estimated to cost about \$200,000 in fiscal year 1985. Each project would eliminate the need for waste to be disposed of in a landfill. The projects include long-term, cost-saving or revenue-generating features to local governments.

45. Question: Also provide for the record specific description and costs related to TVA planned water loss leak detection activities and the pilot community water conservation project.

Answer: Water loss leak detection assistance involves loaning TVA-owned sonic detection equipment to towns or local public water systems and training local personnel to use the equipment. Once leaks are pinpointed, the local government or water system repairs the faulty pipes. Leak detection assistance results in significant water savings, reduced pumping and treatment costs, energy savings, and reduced inflow into sewerage systems. In fiscal year 1983, about \$1.3 million of water treatment costs was saved by Valley communities as a result of this program. TVA costs for the water loss leak detection assistance project are \$75,000.

The community water conservation project would be a concentrated effort combining the use of household and commercial water-saving devices, leak detection leading to water system repair, and the identification of other measures of water conservation in one or several typical communities within the Tennessee Valley. Costs for the conservation project would be about \$50,000.

46. Question: Discuss in more detail TVA work in the handling and treatment of hazardous wastes. Provide for the record a detailed breakout of how the 1984 and 1985 funds will be used.

Answer: Over the past year TVA has tried to identify those critical needs in the hazardous waste management area that are beyond the scope or authority of existing State or local programs and regulatory authorities. TVA has identified three areas where assistance is urgently needed:

- Development of more rational methods for handling wastes within the TVA region, emphasizing reductions in waste generation and ultimate disposal, and increasing waste reuse.
- Development and demonstration of new and more efficient ways or technologies for waste reuse or destruction.
- Education of the general public so informed decisions can be made.

In fiscal year 1984 TVA is initiating efforts to address these issues and has begun gathering information which will be useful in guiding future program development. The fiscal year 1985 budget request provides limited funding for implementing programs which may be developed as a result of these information-gathering activities and public comments.

47. Question: Does TVA expect to construct any demonstration or pilot plants and, if so, what is the estimated budget impact?

Answer: TVA does not anticipate construction of any demonstration or pilot plants for hazardous waste management and no funds are budgeted at this time.

FLUID FERTILIZER STORAGE FACILITIES

48. Question: Does TVA expect similar savings with the second increment capacity of fluid fertilizer storage facilities as experienced in 1984?

Answer: Yes. The fluid fertilizer storage facilities, when completed, will offset net operating costs by approximately \$500,000 annually.

CHEMICAL FACILITIES

49. Question: Have there been any changes in the work planned in TVA's chemical facilities since the budget was presented which would adversely affect your ability to use the funds requested? If so, please explain.

Answer: There have been no changes in the work planned in the chemical facilities that will adversely affect our ability to use the funds requested.

HARDWOOD FUELS RESEARCH

50. Question: Update the Committee on TVA's hardwood fuels research program which is to be significantly expanded in the current year and again in fiscal year 1985. What are the major milestones and facility requirements for this research effort for the remainder of 1984 through initiation of a commercial-scale plant? What will the budget requirements be by fiscal year?

Answer: Design, procurement, and construction of a pilot plant which will process two tons of wood per day will begin in fiscal year 1984. This pilot plant is scheduled for completion in fiscal year 1986. Test operation to gain information to better define the chemistry and microbiology

of the process and obtain information for future scaleup will begin in fiscal year 1986. The pilot plant is currently budgeted at \$2,900,000 in 1984, \$3,500,000 in 1985, and \$1,100,000 in 1986 for a total cost of \$7,500,000. The supporting research program will cost \$1,900,000 in 1984 and \$2,100,000 in 1985. Assuming sufficient improvements in the technology are forthcoming, the next logical milestone would be the scaleup of the pilot plant to a 50-ton-per-day unit which could be placed in operation in fiscal year 1990 at a cost of approximately \$40,000,000 in fiscal year 1984 dollars.

TVA feels that the commercial-scale unit which will process 1,000 tons of wood per day could logically be derived from the process improvements in research and the improvements in equipment flowing from operation of the pilot plant units by the mid-1990s.

51. **Question:** Can you give the Committee some idea of the economics of production of ethanol from wood today compared to what the commercial sector feels the cost must be to make ethanol economically feasible.

Answer: It is anticipated that a commercial-size plant for ethanol production from wood would process about 1,000 dry tons of wood per day. If a plant were in operation today obtaining a yield of 70 gallons of ethanol per ton of wood feed (annual production of 23,000,000 gallons of ethanol), the ethanol production cost would be about \$1.40 per gallon. Currently, the selling price of ethanol ranges from about \$1.60 to \$1.75 per gallon. Hence, potential for commercial feasibility is indicated. This cost study was based on process information obtained from laboratory study, a plant investment cost of about \$75 million, and a \$20 per ton wood cost. Further research and development is expected to identify areas where reductions in the cost of production of ethanol from wood will be possible. Our economic evaluations indicate that the economic position for production of ethanol from wood will improve with time.

The situation in the Middle East continues to be quite unstable. If this source of petroleum is severed, the cost of fuel and hence alcohol, which is used as an octane enhancer, might rise rapidly. The elimination of

lead compounds as octane enhancers also should dramatically increase the demand for ethanol which would substantially improve the commercial viability of ethanol production from wood.

52. Question: Provide for the record a detailed breakout of how the budget request of \$5.6 million will be used.

Answer: The \$5.6 million appropriated for TVA's hardwood fuels research program in fiscal year 1985 will be spent as follows:

<u>Project</u>	<u>In Millions</u>
Ethanol from cellulose:	
Construction of a 2-ton-of-wood-per-day test unit.....	\$3.5
Research activities.....	1.6
Wood supply information.....	0.4
Economic and marketing studies.....	<u>0.1</u>
Total.....	<u>5.6</u>

QUESTIONS SUBMITTED BY SENATOR SASSER

SKILLS DEVELOPMENT

1. Question: The budget request before this committee seeks \$2 million to fund a skills development program. Now this program was funded in the current year at more than \$4.5 million. This has been a successful program aimed at providing medium and high technology skills to the Valley labor force. Why has TVA failed to request adequate funding for this program?

Answer: Over the past two years TVA has demonstrated new state-of-the-art training techniques which continue to be transferred to State and local institutions. Once these training prototype demonstrations are established, replication of the training can be accomplished at lower costs. The fiscal year 1985 request of \$2 million would allow TVA to replicate the most successful demonstration projects.

AGRICULTURAL RESOURCES DEVELOPMENT

2. Question: Under the agricultural resources development program TVA is requesting \$1,082,000 for the family farms program. This represents a steady decline in funding for this program since 1982 when \$1,548,000 was obligated. Why does TVA continue to reduce funding for this program?

Answer: Over 75 percent of Valley farmers gross less than \$20,000 in farm sales. National statistics show that most of the farmers in this category have had negative incomes in recent years. The TVA family farm co-operators have in operation management and production systems that are helping lead struggling farmers back to financial soundness. Results from these farms are being used to make management decisions by more farmers than ever in the history of the program.

In spite of these successes, reductions in this budget category are necessary in order to make the best allocation of limited budgetary resources to address the total array of problems facing farmers at this time. Critical new problems facing the farmers of the region are in marketing and soil erosion. TVA has responded to these new problems with a shifting of funds from the family farm activities to the marketing and farmland preservation programs. Although reductions have been made in the farm family program, the TVA Board is still strongly committed to needs of the family

farm and will keep it a strong element in our agricultural resource development efforts.

TELECOMMUNICATIONS EQUIPMENT

3. Question: The 1985 estimate includes a \$5,000,000 power program expenditure for telecommunications equipment. In 1983 TVA only spent \$30,000 for this budget item and plans to spend only \$850,000 in the current year. Why is there such a large increase requested for telecommunications equipment?

Answer: This is a three-year, \$4 million project to purchase a new telephone system for the Muscle Shoals area to replace a 24-year old leased system. The project is estimated to reduce costs by about \$17 million over the 20-year system life. Other benefits will be improved service for Muscle Shoals and improved management and control of the total TVA telephone system.

PAYMENTS TO VENDORS AND CONTRACTORS

4. Question: When TVA testified before the Congress last year you provided us with an estimate of \$6,154,000 for payment for services furnished by TVA to vendors and contractors. The budget justification before us today indicates that for the current year you will spend \$19,993,000 for such contractual services. Why has TVA more than tripled its plans in this regard? Provide for the record how you had proposed to spend the \$6,000,000 you justified last year for fiscal year 1984 and the \$20,000,000 you are today proposing for fiscal year 1984.

Answer: The increase reflects deferral from fiscal year 1983 to 1984 of steam generator tube modifications at the Watts Bar Nuclear Plant. The work had to be delayed because the original schedule conflicted with fuel load testing of unit 1 of the nuclear plant.

POWER SUPPLY

5. Question: TVA has stated that it has several power supply options which today appear less costly than the construction of new, conventional central generating stations. After completion of Watts Bar and Bellefonte Nuclear Plants, these other options could delay the need for new central station capacity until the mid-1990s. Deferred generating units include Hartsville A, units 1 and 2, and Yellow Creek units 1 and 2. TVA has stated in its fiscal year 1985 budget that \$28 million will be required to maintain these deferred plants in fiscal year 1984 and 1985. When will a decision be made if these additional deferred central station plants should be canceled?

Answer: TVA remains committed to providing an adequate supply of power at the lowest feasible cost to support high economic growth in the Valley. Over the past several years, TVA has adjusted its construction schedule on nuclear plants by either deferring or cancelling construction in response to, among other factors, an outlook for reduced load growth. As noted, TVA currently is maintaining the option to resume construction on Hartsville A units 1 and 2 and Yellow Creek units 1 and 2 at a cost of \$28 million in fiscal year 1985. This gives TVA the flexibility to use these units if load projections and other conditions indicate that additional generating capacity is needed in the mid-1990s.

TVA plans to continue this deferral for at least the next two to three years, making periodic reviews to determine whether economics would justify either resuming construction or canceling the units. Its August 1983 "Load Forecast and Power Supply Summary" document indicated that TVA's least cost course of action in providing capacity was to continue the Hartsville and Yellow Creek plants in a deferred status. Continued deferral was not only the option with the lowest expected cost, but it also minimizes the risk of higher costs to TVA ratepayer by maintaining flexibility to choose among different generation options at a later date.

6. **Question:** Given the fact that TVA plans to spend about \$28 million per year to defer four units, what would it take in terms of time and dollars to restart full scale construction of these units?

Answer: If a decision was made to restart the units, engineering, design, support services, project management and planning could start immediately with an annual cost of about \$140 million per year for the four units. Approximately 18 months after design restart, construction would restart and full scale construction would be reached after roughly one year, at which time expenditures would be in the range of \$1 billion per year. Incidentally, the \$28 million per year deferral expense is expected to decrease to \$20 million per year by 1986.

POWER BORROWINGS

7. Question: TVA's current borrowing limit with the FFB was set in 1979 at \$30 billion. Given the fact that construction of power plants is scheduled for completion in the early 1990s when do you believe your current \$30 billion ceiling will be reached?

Answer: Completion of the four deferred nuclear units, based on current cost estimates, in addition to past borrowings, would result in cumulative commitments of up to 90 percent of TVA's present borrowing authority. TVA's use of this borrowing authority is not limited to only completion of these nuclear units. Present uncertainties about nuclear technology and regulation and about possible acidic precipitation control legislation, both of which could lead to significant new capital investments in existing plants, indicate that retention of the remainint 10 percent would be a prudent decision.

8. Question: In the fiscal year 1984 budget, the statement was made that borrowing would decline to the extent that by 1987 TVA would be able to meet its capital requirements entirely through internally generated funds. Is this still an accurate statement and, if so, is it possible that your borrowing authority could be reduced?

Answer: Yes, the statement is accurate. It appears that TVA may be able to meet its capital requirements entirely through internally generated funds by 1987 if construction is not resumed on the deferred nuclear units. We do not believe, however, that the present borrowing authority should be lowered.

The \$30 billion in borrowing authority was provided in order that TVA might acquire the generating capacity required to meet its future load requirements. Those requirements are not conservatively represented by the eight nuclear units under construction and in deferred status. The remaining borrowing authority would allow their completion. Alternatively, that authority would allow installation of other sources of capacity if those sources appear more economic than completion of the deferred nuclear units.

We should note additionally that it is not availability of borrowing authority but rather strict business considerations which determine

decisions about future generating capacity. Borrowing authority only gives the TVA Board sufficient flexibility to exercise its statutory responsibilities.

SALE OF TVA POWER

9. Question: According to TVA, generating capacity will be adequate until the mid-1990s. The revenue estimates for fiscal year 1984 show that the total kilowatt hours sold to municipalities and cooperatives, federal agencies, and the commercial/industrial sectors will decrease from the 1983 level. The fiscal year 1985 budget also shows TVA power sold to other systems decreasing. Given the excess power within the TVA system, what efforts is TVA making to sell electricity to electric utilities outside the region in order to increase revenues?

Answer: TVA, on a continuing basis, attempts to market through exchange arrangements any electric energy available from the TVA system that is in excess of the day-to-day needs of customers in the TVA area. There have been many discussions between representatives of TVA and other power systems in which we have discussed various types of arrangements for energy exchanges. TVA stays in contact with other systems and continually monitors their power requirements and supply situation in an effort to identify areas in which additional power may be needed and could be provided through exchange arrangements.

OFFICE SPACE

10. Question: A major reorganization within TVA will merge the Office of Power, based in Chattanooga, and the Office of Engineering Design and Construction, based in Knoxville, into the Office of Power and Engineering with its remaining staff to be located in both cities. According to news reports, about 9,500 jobs could be lost over the next few years because of the merger. Currently, a new office complex is being constructed in Chattanooga to be leased by TVA. Also, TVA recently accepted a proposal from a private developer to lease three additional office buildings in Knoxville. Has TVA done a reassessment of office space needs based on this merger and other personnel reductions in recent years to show that additional office space in both Chattanooga and Knoxville is warranted?

Answer: TVA assesses its office space requirements annually and more often as significant organizational changes warrant.

We were well into construction of the Chattanooga office complex when the current TVA employment reduction began. TVA will minimize the negative impact of the reduction on office space by vacating several buildings on

which leases will be terminating and by subleasing other buildings until their lease periods expire.

In Knoxville long range requirements were assessed as a part of the current consolidation effort. We have attempted to ensure adequate flexibility over the next 2 to 10 years to respond to further organizational changes without being left with excess space.

In both Chattanooga and Knoxville operating cost savings are projected as a result of the consolidation.

11. Question: What are your current cost estimates for both the Chattanooga and new Knoxville office buildings?

Answer:

Chattanooga - TVA's Chattanooga Office Building is currently estimated to cost \$193.6 million including interest and closing costs.

Knoxville - The space currently under consideration in Knoxville will be leased and will cost \$9.19 per square foot, including all services. The cost under this present proposal is projected to be over \$750,000 annually less than the anticipated cost for the space currently in use over the same period.

NATIONAL FERTILIZER DEVELOPMENT CENTER

12. Question: The National Fertilizer Development Center at TVA had operating expenses of over \$31 million in fiscal year 1983, and it is expected to increase to \$36 million in fiscal year 1984 and \$39 million in fiscal year 1985. Research center goals include: (1) developing fertilizers, (2) determining ways to manufacture fertilizers, and (3) making new technologies available to the agriculture community. Given the size of these expenditures, has TVA considered imposing a users fee on the agriculture producers who benefit from the research in order to make this facility pay for itself?

Answer: Yes, TVA through many years has carefully evaluated the users fee. In the case of NFDC, a user fee conceivably could be applied to (1) experimental fertilizer products sold to industry firms, (2) research and development projects, and (3) consulting services by TVA staff.

- Product Fees--In recent years, NFDC has produced and distributed about 160,000 tons of experimental fertilizers annually. Relying entirely on a product user fee to replace \$40 million of appropriated funds annually would require a fee of \$250 per ton. Such a fee is much higher than the market value of the fertilizer. This subsidy, which is relatively small given the benefits received, is necessary because of the high unit cost of production resulting from the experimental nature and limited amount produced when compared to commercial producers. Increasing costs would simply reduce or eliminate sales, thereby defeating the very purpose of the program.

- Research and Development Projects--The NFDC mission is broad acceptance of its new technology so that the benefits are as widespread as possible. Selling the results of TVA R&D for exclusive use defeats this purpose and would have us competing as a private entity rather than acting for the broadest public benefits.

- Consultation Fees--Consulting fees are charged for computer services, selected publications, special library services, conferences, and training programs. If the expertise in fertilizer R&D, production, or introduction were made available on contract to private firms, questions of proprietary ownership of developments could seriously discourage technology transfer. Technical expertise is provided to a limited degree through the fertilizer technology introduction program.

For these reasons, the TVA Board feels that user fees are not a viable option for offsetting the costs associated with the work at the National Fertilizer Development Center.

COAL INVENTORIES

13. Question: In an August 1981 report, GAO critized TVA's coal purchasing practices. I understand that you have taken actions since then to improve coal purchasing. In fact, GAO reported in April 1983 that actions TVA took since its earlier report saved TVA about \$770 million. However, in 1981 GAO stated your coal inventory was about 14 million tons, or an excess of about 6 million tons. Similarly, in 1983 GAO stated your coal inventory was still about 14 million tons or, because of reduced burn requirements, an excess of about 7 million tons. Your fiscal year 1985

budget puts coal inventory at about 14 million tons as of September 30, 1983. The budget states coal inventories will be reduced by 3 million tons during fiscal year 1984 and will stand at 6 million tons by the end of fiscal year 1985 for an 8 million reduction over two fiscal years. In light of the fact that TVA has not been able to reduce coal inventories in the two years since GAO first reported on this matter, how will you reduce coal inventories by 8 million tons over the next two fiscal years?

Answer: Since the GAO report, TVA's system coal inventory has been reduced from 15.7 million tons on September 30, 1980 to 13.6 million tons at the end of fiscal year 1983. During the first 5 months of fiscal year 1984, TVA has further reduced its system coal inventory from 13.6 million tons to 11.3 million tons.

Currently we are faced with a possible United Mine Workers of America (UMWA) coal strike at the beginning of fiscal year 1985. We now expect to begin rebuilding selected inventory levels so that we will enter this possible strike period with a system inventory of approximately 12.7 million tons, which equates to approximately 120 days' supply at expected burn. Furthermore, TVA will be able, even without a miners' strike, to substantially reduce inventories in fiscal year 1985 due to reductions in the quantities of coal under contract.

14. Question: With all this excess coal inventory, why is TVA now buying coal on the open market rather than using its inventory?

Answer: There is no excess inventory. TVA target inventory levels vary depending upon circumstances. TVA does not now have adequate inventory at all plants and our system coal inventory is below a level which we believe is desirable in light of a possible miners' strike which may begin on September 30, 1984. Therefore, TVA is purchasing coal for individual steam plants which are currently below the planned prestrike target inventory levels. When new contracts are agreed upon among the UMWA and the coal industry, TVA will begin to reduce the inventory levels by both utilizing current inventories and reducing purchases.

TVA COAL RESERVES

15. Question: TVA currently has about 220,000 acres of coal reserves containing about 700 million tons of coal. TVA's investment in these properties is about \$121 million. TVA has stated that these reserves were acquired to help ensure a reliable and economic fuel supply for its coal-fired

power plants. However, only one TVA owned reserve is currently being mined for TVA use--Breckenridge. Also, the cost of Breckenridge coal is about \$43/ton compared to TVA's average coal costs of about \$41 per ton. Similarly, TVA has acquired about 272,000 acres of uranium reserves containing about 95 million pounds of recoverable uranium. TVA's investment in uranium reserves is about \$341 million. Recently, TVA released some uranium properties because they were determined to be uneconomical to mine. If coal reserves are to provide a reliable and economic supply of fuel, why is only one reserve being developed?

Answer: TVA has four major coal properties, one of which (Camp Breckenridge) is in production. Of the remaining three, portions of the Red Bird property are being leased to others and are producing income to TVA.

There is no activity on the Koppers properties, although there was mining during the 1970s, and the Ewing Northern Coal Association (ENCA) properties are being studied for possible development. Mined coal holdings such as the Alabama and Georgia properties are either depleted (Alabama) or are being leased on a limited basis for income and coal quality information.

The current excess supply of coal in the open market and resulting low prices have made it unnecessary to initiate additional TVA production. By examining the development alternatives on TVA properties, TVA will be in a position to add production when market conditions warrant.

16. Question: With the pollution control devices now in place on TVA's coal-fired power plants, is the grade and quality of coal in your reserves compatible with the plants?

Answer: We believe that TVA's coal reserves can be used in supplying coal for TVA in one or more of our coal-fired plants. Determining the quality of the coal and its compatibility without plants is an important aspect of our work related to evaluation of coal reserves. For example, tests have been conducted to determine the effects of trace elements in the burning characteristics of our southern Illinois coals, and samples being collected from the Tennessee and Georgia reserves are analyzed to determine at which plants these coals can be burned in compliance with existing air quality standards. TVA's reserves will be utilized as a partial source of coal in the future when economics indicate that they are the potentially least expensive supply source.

COAL AND URANIUM RESERVES

17. Question: Your budget for the development of coal and uranium reserves is expected to decrease by \$3 million. If reserves are an important fuel source, why are these expenditures decreasing?

Answer: Expenditures for coal land development (other than Camp Breckinridge) were \$250,000 in 1982, \$350,000 in 1983, and will likely exceed \$450,000 in fiscal year 1985. These expenditures are projected to exceed \$700,000 per year by fiscal year 1990.

Due to the current supply and inventory situation, new uranium supplies will not be needed for several years and it is anticipated then that ample quantities of uranium may be purchased in the open market at prices below the expected cost of mining TVA reserves. Therefore, the uranium reserve base of approximately 45 million pounds is being held to provide assurance of future supply and for mining when the mining alternative is more economically attractive. TVA uranium properties have been placed in a standby status with reduced budgets which permit us to hold significant reserves in the ground for very low cost.

COAL PURCHASES

18. Question: What types of analyses are performed to determine whether it would be more beneficial to purchase coal on the open market or mine a particular reserve?

Answer: Estimates of mining costs and delivered costs of coal to a plant are prepared based on exploration results and as a part of our ongoing development studies for our reserves. These cost estimates are then compared to current and projected market prices for purchasing similar coals in the open market to arrive at an optimum date for the initiation of production.

As an example, the Ewing Northern Coal Association (ENCA) reserve was first drilled by TVA in 1976. Based on the information obtained, a preliminary mining cost study was completed by an outside consultant in 1977 and updated in 1980. The study included estimates of cash flow expenditures for capital and operating costs over the projected life of the mine.

Transportation alternatives and costs were also studied to arrive at an estimated delivered cost to TVA plants.

Additional drilling was completed in 1981 to confirm the data on which the cost study was based and to obtain additional quality information. Estimated delivered cost for the ENCA reserve was reevaluated and compared to projected market prices for similar quality coals. This comparison indicated that it would not be economically feasible to initiate mining development work at ENCA before the late 1980s.

TVA continues to monitor those factors which could change the competitive position of the ENCA reserve. TVA is now concentrating its exploration efforts on its Appalachian reserves which, in contrast to the Midwestern reserves, are more suitable to the development of small mines. The most promising areas are being explored, and cost and quality studies are underway to determine when production should be initiated or if the property should be leased or sold.

TVA is prudently doing extensive evaluation on coal reserves before plans are made to proceed with any mining development, and exploration activities and studies similar to those completed for ENCA will be completed on each TVA reserve prior to the initiation of production.

URANIUM RESERVES

19. Question: What are your plans relative to exploration and development of uranium reserves given the slow-down in the nuclear construction program?

Answer: Even though TVA's nuclear construction program has slowed, the reactors operating and those that will be completed will have a substantial uranium requirement. TVA's current uranium requirements are roughly 2 million pounds of uranium concentrates per year. When all nine planned reactor units are operational by 1991, the annual need will be about 3.5 million pounds per year. Due to the current supply and inventory situation we do not plan near-term development of TVA reserves as a source of uranium supply, but will hold the reserves in the ground until mining costs are more economical than open market purchases. We anticipate a moderate exploration program to seek new reserves to augment our supply situation in the late 1990s and beyond.

SUBCOMMITTEE RECESS

Chairman HATFIELD. No other questions at this time. We will stand in recess until 10 a.m. in the morning, tomorrow morning, when Secretary Hodel will present the Department of Energy budget.

[Whereupon, at 3:35 p.m. Wednesday, February 29, the subcommittee was recessed to reconvene at 10 a.m. March 1.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

	Page
Bielo, Robert J., Executive Director, Susquehanna River Basin Commission, prepared statement.....	334
Bratton, Lt. Gen. J. K., Chief, Corps of Engineers.....	1
Prepared statement.....	3
Broadbent, Robert, Commissioner, Bureau of Reclamation, Department of the Interior.....	229
Prepared statement.....	231
Clark, William, Secretary of the Interior.....	205
Prepared statement.....	209
Dean, Charles H., Jr., Chairman, Tennessee Valley Authority.....	371
Depuy, Warner M., U.S. Commissioner, Susquehanna River Basin Commission, prepared statement.....	333
Eastman, Paul W., P.E., Executive Director, Interstate Commission on the Po- tomac River Basin, letter from.....	358
Freeman, Richard M., Director, Tennessee Valley Authority.....	371
Freeman, S. David, Director, Tennessee Valley Authority.....	371
Gianelli, William, Assistant Secretary of the Army (Civil Works).....	1
Prepared statement.....	3
Hansler, Gerald M., Executive Director, Delaware River Basin Commission, pre- pared statement.....	344
Kanuck, George J., U.S. Commissioner, Delaware River Basin Commission, prepared statement.....	343
Klostermeyer, William C., Acting Director of Budget, Department of the Interior.....	229
Olson, Robert, Assistant Commissioner, Planning and Operations, Bureau of Reclamation, Department of the Interior.....	229
Spillers, Bill, Acting Assistant Commissioner, Administration, Bureau of Rec- lamation, Department of the Interior.....	229
Stambaugh, Warren G., Chairman, Interstate Commission on the Potomac River Basin, prepared statement.....	354
Steinberg, Bory, Chief, Programs Division, Civil Works, Corps of Engineers.....	1
Wall, Maj. Gen. John F., Director, Civil Works, Corps of Engineers.....	1
Willis, William F., general manager, Tennessee Valley Authority.....	371

SUBJECT INDEX

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

	Page
Big Sandy and Kanawha Rivers studies	68
Blair and Sitcum Waterways, Wash.....	115
Bonneville:	
Navigation lock.....	89, 100
Power units, Oreg. and Wash.....	112
Budget overview and summary	25
Canaveral Harbor, Fla.....	198
Charleston small boat harbor, Oreg.....	106
Chief's reports recommending Federal action, status of.....	160
Columbia and lower Willamette Rivers, Oreg.....	103
Columbia River:	
At the mouth.....	88
Coal export channel.....	104
Dredging.....	86
Construction budget request.....	28
Coos Bay, Oreg.....	106
Coquille River.....	106
Dredge fleet.....	29
Dredged material, ocean disposal of.....	26, 30, 72
Eagle Bay Bridge.....	82
Elk Creek Lake, Oreg.....	111
Emergency employment bill.....	26, 28, 99
Emergency fund, status of.....	118
Everglades National Park, Fla.....	199
Federal engineer, role of.....	27, 31
Field and BERH/MRC reports recommending Federal action, status of.....	165
Flood damages.....	116
Flooding, potential.....	31
Funding capabilities, fiscal year 1985.....	120
Gallipolis locks and dam.....	66, 69
General investigations.....	29
Grays Harbor, Wash.....	108
Greater New York City area water supply.....	201
Hopper dredge bid experience.....	119
Inflation impact.....	167
Inland waterway projects, support for.....	70
John Day lock and dam.....	113
Powerhouse major rehabilitation.....	112
Kissimmee River, Fla.....	200
L&A Railroad bridge replacement.....	79
Lake Darling project.....	80, 91, 92
Lake Sakakawea, N. Dak.....	79
Levisa and Tug Forks of Big Sandy and Cumberland Rivers, W. Va. and Ky.....	64
Section 202 projects.....	65
Work in South Williamson.....	66
Locks and dams 7 and 8, Monongahela River.....	68
Lower Snake fish and wildlife compensation, Oregon, Washington, and Idaho.....	114

	Page
Manpower	31
McNary lock and dam, second powerhouse, Oreg. and Wash	114
Mississippi River and tributaries project	29
Mount St. Helens	27, 101
Funding requirements	83
Impact of future eruptions	87
Monitoring	88
Single retention structure	85
Spirit Lake outlet	82
National mobilization, role in	32
National water policy	94
Natural disasters, responses to	30
New construction starts	25
New contract awards of \$1 million or more, planned and proposed	173
New start legislation, status of	70
Operations and maintenance request	29
Oregon coast dredging program	108
Phoenix, Ariz., and vicinity	203
Ponape hydropower project	197
Port Orford, Oreg.	107
Presque Isle, Pa., local protection project	197
Program accomplishments	28
Projects in litigation, status of	145
Red River Waterway	73
Expedited schedule	75
Impact of hydropower considerations	75
Impact of sequential schedule	74
Role of OMB	78
Status of hydropower negotiations	77
Regulatory reform	26
Rogue River at Gold Beach	107
Section 107 projects	110
Siuslaw River and bar, Oreg.	104
Snettisham, Alaska	111
South Carolina water aquifer	90
Umpqua River, Oreg.:	
And bar	105
Basin	105
Upper Gila River basin	203
Washington level processing of reports recommending Federal action	148
Water policy:	
Agency role in	81z
Pending legislation	25
Water resources benefits	115
Water supply	116
Willamette River basin bank protection, Oreg.	111

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

Animas-La Plata and Narrows projects, Colorado	246
Aquatrain project	275
Arbuckle project, Oklahoma, sulphur pipeline division	307
Belle Fourche Irrigation District	244
Boulder Canyon project improvements, Arizona-Nevada	294
Budget request	229
Buffalo Bill Dam, Wyo.	279, 289, 298
CENDAK study, South Dakota	278
Lake Andes-Wagner projects	245

	Page
Central Arizona project, Arizona-California-New Mexico-Nevada-Utah	276, 312, 326
Non-Indian distribution system—Arizona and New Mexico	314
Plan No. 6	328
Central Valley project, Auburn-Folsom South unit, California	295
Colorado River:	
Flooding	250, 329
Front work and levee system, Arizona-California-Nevada	308
Colorado River Indian Reservation—Parker area	324
Contract awards for 1985, new	270
Coolidge Dam	330
Deep-carbonate aquifer project, Nevada	278
Farmers Irrigation District, Oregon	253, 290
Fish and wildlife mitigation plan	243
Fryingpan-Arkansas project, Colorado	298
Garrison diversion unit, North Dakota	242, 300
General investigations, new	286
Griffith water project, Nevada	310
Guam water resources study	290
Guernsey Dam, North Platte project, Wyoming-Nebraska	307
Headgate Rock Dam	324
Joint Technical Committee	243
Leadville mine drainage tunnel project, Colorado	309
Lower Colorado River 1984 operating plan	316
Lower Gunnison basin unit (winter water), Colorado	279
McGee Creek project, Oklahoma	303
Middle Rio Grande project, New Mexico	319
Morocco, contract with on atmospheric research	247
Palmetto Bend project, Texas	309
Pick-Sloan Missouri basin program:	
Heart division, Dickinson unit, North Dakota	298
Narrows unit, Colorado	303
O'Neill unit, Nebraska	275, 301
Project:	
Capabilities for 1985	260
Current status report	264
Reclamation projects, payoff of	242
Rogue River Basin, Grants Pass, Oreg.	252
Salt River project, safety of dams project, Arizona	311
Santa Margarita project, California	304
Savings due to low bids	245
Siletz River basin study	252
Tualatin project, Oregon	256
Twin Falls Canal	331
Velarde community ditch project, New Mexico	306
Washita basin project, Oklahoma	310
Water resources research veto override	247
WEB project, South Dakota	244, 245, 306
Weather modification program	247
Wind-hydroelectric energy project, Wyoming	292
Yuma:	
Desalinization project	325
Wells	325
Yuma Quartermaster Depot	325
Colorado River front work and levee system, Arizona-California-Nevada	308

OFFICE OF THE SECRETARY

Administration water policy	207
Auburn Dam, Calif.	209, 219
Bureau of Reclamation budget	208

	Page
Colorado River basin flooding	209
Consistency between agencies	214
Consistent policy	217
Construction new starts	208
Cost sharing on projects	218
Dam safety	207
Delaware River Basin Commission	343
Departmental reorganization	206
Garrison diversion unit, North Dakota	215
Grand Coulee Dam	224
Gregory pump storage project, South Dakota	218
HIPLEX	216
Interstate Commission on the Potomac River Basin	354
Legislation with administration policy, consistency of	213
Project:	
Authorizations	212
Cost sharing	207
Public works program	216
Santa Margarita project, California	212
Susquehanna River Basin Commission	333
Water resource development	
Federal role in	211, 212
Flexibility in	215
Water:	
Resources authorization legislation	213
Summaries	206
Weather modification contract with Morocco	216

TENNESSEE VALLEY AUTHORITY

Agricultural resource programs	378
Atmospheric fluidized-bed combustion plant	375
Browns Ferry nuclear plant	394
Budget overview	373
Columbia Dam and Reservoir	379
Electric power rates	375
Emergency Employment Act	390
Endangered species problem	380
Energy conservation	376
Forestry programs	377
Hardwood fuels research	379
Jobs bill program	393
National fertilizer development programs	378
Ocoee Dam No. 2 recreational water releases	374
Program initiatives, new	377
Program request for 1985, specific	376
S. David Freeman, tribute to	371
Soil conservation efforts	375
Special opportunities counties and cities	382
Tennessee Tombigbee Waterway	396
Unobligated carryover balances	374